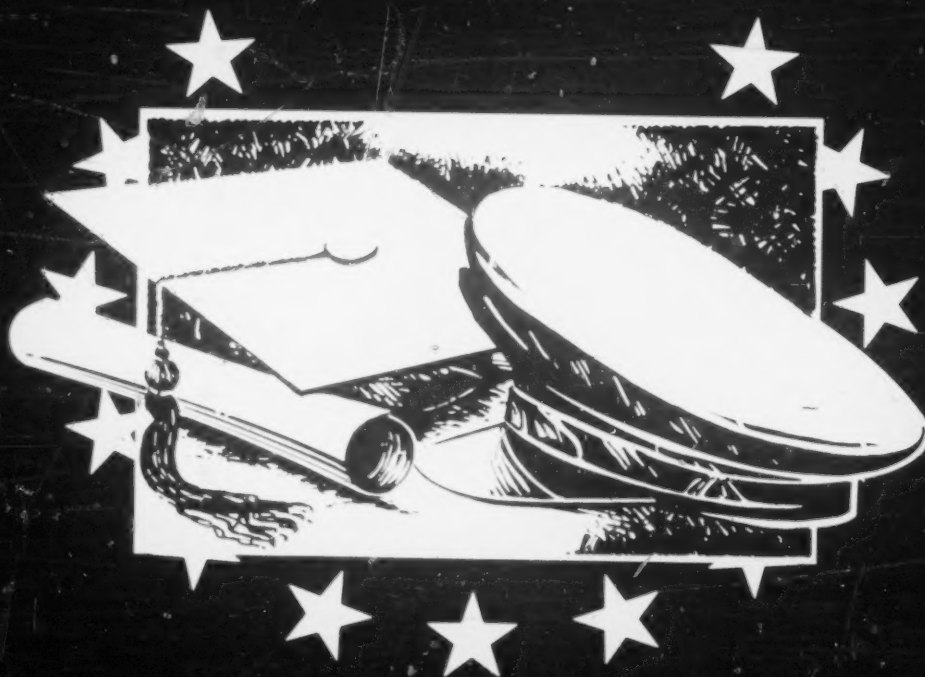


Joining Forces The Military's Impact on College Enrollments

Holly Hexter and Elaine El-Khawas



American Council on Education
October 1988

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Foreword

The American Council on Education's cooperation with the military and veteran communities dates back 70 years. ACE was founded in 1918 to mobilize the higher education community in support of America's role in World War I. At the end of the Second World War, ACE worked with other education and veterans organizations to ensure the enactment of the landmark GI Bill, legislation that provided educational opportunities for hundreds of thousands of returning servicemembers. In the years that followed, educators developed ways to determine appropriate credit for learning acquired in the military. First published in 1946, ACE's *Guide to the Evaluation of Educational Experiences in the Armed Services* has become the standard reference for this purpose.

ACE and other associations have worked with the Department of Defense and the individual services in other ways as well—the Servicemembers Opportunity Colleges network being just one of several excellent examples of continuing cooperation.

As this report documents, the need for cooperation between the military and higher education continues, particularly in light of the significant number of military personnel who are expected to leave the services with education benefits.

We commend this report to all those engaged in supporting the educational goals of service men and women and veterans.

ROBERT H. ATWELL
President
American Council on Education

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This report could not have been completed without the assistance of offices within the Department of Defense. Dr. Lenore Saltman, coordinator of voluntary education, provided initial guidance and continuing support throughout the process. A steady stream of data on characteristics of new recruits was provided by W. Steven Sellman, director for accession policy, and members of his staff, particularly Maj. Denny Eakle-Cardinal. Zahava Doering of the Defense Manpower Data Center aided in this regard. Barry Cobb, director of the Defense Activity for Nontraditional Education Support (DANTES), and his staff supplied information on post-secondary enrollments and degrees awarded to military personnel. Education program offices of the individual armed services were a major source of detailed data on characteristics of recruits, education benefits, and enrollments in voluntary education. Special thanks go to Lt. Col. Bruce T. Battey, director of education, U.S. Army; Warren Rucker, education adviser for the education division, U.S. Army, and members of his staff, Karen Kerschenstein and Brenda Karasik; Dr. M. Frances Kelly, head of the professional education branch, U.S. Navy; William A. Gill, chief of education services, U.S. Air Force, and Gayle Christiansen, education specialist, U.S. Coast Guard.

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Assisting with data on school enrollment and labor force participation

were C. Dennis Carroll, National Center for Education Statistics; Paul Siegel, Robert Kominski, and Rosalind R. Bruno of the Census Bureau; and Sharon Cohany of the Bureau of Labor Statistics.

Within the higher education community, Allan Ostar, president of the American Association of State Colleges and Universities, had continuing involvement in the development of this report. Information came also from Arden L. Pratt and David R. Eyler of the S. S. Kreschmer Opportunity College, an AASCU-affiliated organization. Within ACE itself, guidance came from Robert Atwell, ACE president; Henry Spille, vice-president and director, Center for Adult Learning and Educational Credentials; Eugene Sullivan, director of military evaluations; Reginald Wilson, director of the Office of Minority Concerns; Andrew Malizio, assistant director of the Division of Policy Analysis and Research, and others on the ACE staff.

The report was reviewed by many of the people already listed. Providing additional guidance were Janice H. Laurence, senior scientist, Human Resources Research Organization; Martin Binkin, senior fellow, Brookings Institution; Janet Hansen, The College Board; William Cox of *Black Issues in Higher Education* and a former Air Force education specialist; C. Donald Sweeney and David R. Hulteen of the National Association of State Approving Agencies; Verne Duncan, Oregon State Superintendent of Public Instruction; David Reyes-Guerra, executive director, Accreditation Board for Engineering and Technology, Inc.; Richard J. Ernst, president, Northern Virginia Community College; and C. Wayne Williams, executive director, Regents College Degrees and Examinations for the State University of New York.

Production of the report was coordinated by Rosa Lott-Hawkins, with assistance from Margarete Howell.

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Executive Summary

Competition Is More Limited Than Generally Assumed

- In recent years, the military has succeeded in attracting a greater percentage of recruits with high school diplomas or their equivalent. In fact, as of 1987, almost all new recruits (93 percent) were high school graduates.

- Aid for college in the form of tuition assistance and New GI Bill benefits appears to be a major incentive for enlistment among the best recruits.

- The military has attracted a slightly larger share of male high school graduates since 1979, as has higher education. In the next five years, however, the military's share is expected to remain roughly constant. In fact, in 1992 the services expect to recruit 8,000 fewer than the 241,000 male high school graduates they recruited in 1987.

- For Blacks, recent trends reveal the exact opposite pattern. Between 1979 and 1987, both the military and higher education drew smaller proportions of Black male high school graduates. There were increases in the share claimed by the labor force and by other activities, which could include enrollments at proprietary institutions.

The Military Is a Significant Source of College Enrollments

- Servicemembers are substantially involved in pursuing off-duty education. A significant number earn initial college credit for their coursework and for military training. In 1987, military personnel were enrolled in more than 778,000 college-level courses.

- A substantial number of servicemembers complete degree programs while serving in the military. In 1987, military personnel earned more than 19,000 associate degrees, about 6,000 baccalaureate degrees and about 7,000 graduate degrees.

- Most recently, more than three-quarters of eligible servicemembers were signing up for Montgomery GI Bill benefits, which provide funds for postservice education and training. The Veterans Administration expects that a high percentage of New GI Bill participants will put their benefits to use.

- Of the 450,000 veterans who are expected to be using the New GI Bill and other veterans' education assistance in 1993, about 404,000 are likely to be enrolled in college-level study, primarily at public institutions.

- This represents a net gain of 77,000 in college enrollments of veterans over the 327,000 enrolled in 1987.

Introduction

The nexus between the nation's colleges and universities and the armed services is a rich and complex one. The military relies on postsecondary institutions for the knowledge base undergirding defense-related research and development. Along with the service academies, Reserve Officers' Training Corps (ROTC) programs at colleges and universities produce commissioned officers for the services. Colleges and universities also educate large numbers of enlisted military personnel, on- and off-base, both in specially designed military courses and in voluntary education pursued by the soldier/student.

Because the armed services and postsecondary institutions traditionally have relied on a continuing influx of young adults for their missions, both communities have a strong interest in issues related to recruitment. At a time when the pool of 18- to 24-year-olds is declining, it is not surprising that each should be attempting to identify additional means of mutually beneficial cooperation and collaboration.

This report began as an attempt to reply to the following questions:

- Do colleges and the military now compete for the same segment of the college-age youth population? Will they in the future?
- To what extent do military personnel participate in postsecondary education, either while on active duty or upon release from military service?
- What are the projections for veterans' use of educational benefits and what implications do they have for postsecondary enrollments?

The question of competition for college-age youth between the "garrison" and the "academy" has been visited before. Two previous ACE reports,

"Competing for the Nation's Youth" (*Educational Record*, Winter 1981) and *Competition and Cooperation in American Higher Education* (1981), tackled the subject head on. One essay in the latter publication argued that by the early 1990s, military manpower needs would produce an intense competition for high school graduates; another countered that the relationship could not be construed as competitive because the military produces consumers of education. Still other essays implied that even if the military's "take" of male high school graduates were to rise modestly, the services would still continue to generate more demand for postsecondary education than they would suppress.

This report argues for that middle ground. As of 1988, the dire scenarios of a struggling volunteer force and empty college classrooms have not been realized. Although the number of first-time freshmen has dropped slightly, overall college enrollments have remained steady. With a significant financial investment, the armed services have met or exceeded their recruiting goals in the last five years, even as unemployment has diminished and the traditional recruiting pool has shrunk. Furthermore, the quality of enlistees, as defined by one measure, has improved: the percentage of new recruits with a high school diploma is higher than at any time since the 1960s.

This report demonstrates that, during a time when the total pool of high school graduates has decreased, both the military and higher education's share of male graduates has increased. Trends differ for Black graduates: Contrary to what has been assumed, both the armed services and higher education are taking a smaller share of Black male graduates than in 1979.

The prospects for future competition between colleges and the armed services during the continuing decline of the traditional college-age pool rest largely on two debatable assumptions: that both must enroll the same numbers of 18- and 19-year-old males in the 1990s as today, and that both must draw from the same pool. Yet for budgetary and other reasons, it is already known that the services plan to recruit fewer persons in 1992 than in 1988. As for the pool, certainly the military and higher education will have a smaller pool of recent high school graduates from which to draw, but it is not clear that they will be recruiting the same people.

A major focus of this report is the other part of the equation—the military as the generator of college enrollments. Military personnel enroll in hundreds of thousands of courses each year, either through the services' off-duty voluntary education programs or on their own. Several hundred thousand veterans each year enroll in postsecondary study with the aid of the GI Bill or other veterans education benefits.

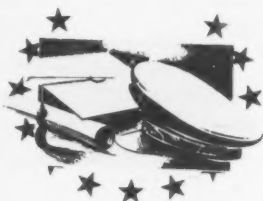
Of particular interest is the New GI Bill (called the Montgomery GI Bill after its congressional sponsor), which has already proved an effective device for military recruiters, and in which new recruits are enrolling in large numbers. Even as it enhances the attractiveness of military service, the Montgomery GI Bill is expected to generate a growing number of veterans—as well as reservists—who will enroll as students in colleges and universities in the years ahead.

In sum, this report concludes that competition is not likely to dominate the interaction between the nation's campuses and the branches of military service. Whatever limited competition may exist is heavily overshadowed by the substantial involvement of servicemembers and veterans in postsecondary education.

The military and higher education communities have a long history of shared interests and cooperation. Both institutions play a valuable societal role of developing and educating the nation's youth. Their best prospect is to join forces to ensure that their policies and programs improve the articulation between military service and academic learning.



U.S. Army



Putting the Competition Issue into Perspective

Are colleges and the military competing for the nation's youth? For some years now, several observers have predicted that competition would intensify as the pool of traditional college-age youth declined. To shed light on this question, this chapter examines changes in the characteristics of new recruits and trends in the rate of military participation by high school graduates.

The Pentagon recruits 300,000 annually

For the last seven years the Department of Defense has met or exceeded its active-duty recruiting objectives. The total number of new recruits in the All-Volunteer Force has declined from 360,000 in 1980 to 297,000 in 1987.¹ During this time, higher reenlistment rates have caused the services to recruit smaller cohorts of first-time enlistees.

New recruits are primarily young adults, the same age group traditionally recruited by colleges and universities. In recent years, the median age of new recruits has been rising: in 1987, the median age was 19.5 years, compared with 19 years in 1979. In 1987, 18-year olds made up 34 percent of new recruits; 17- to 19-year olds combined made up 63 percent of

new recruits; and 17- to 20-year olds made up 75 percent. Only 9 percent were 24 years old or older.²

Most new recruits are male. In 1987, 88 percent of recruits were young men. By 1992, the Pentagon projects that women will make up 13 percent of new recruits.³

In 1987, 28 percent of new recruits were members of minority groups; 20 percent were Black and 5 percent were Hispanic (Table 1). Historically, the Army has had the greatest proportion of Black recruits; for the Army alone, the proportion of recruits who are Black has declined from an all-time high of 37 percent in 1979 to 23 percent of Army recruits in 1987.⁴

Almost all military recruits today are high school graduates

In selecting applicants, the services rely heavily on aptitude scores. Education credentials are also important. The services emphasize high school completion because their research has shown that high school graduates adapt better to military life and are more likely than nongraduates or alternative credential holders to complete their term of duty. Thus, the services have a three-tier preference system for rating educational credentials:

Table 1
Minorities as a Percentage of Total Recruits, by Service, 1987

Service	Black	Hispanic	Other ^a	Total
Army	23	4	3	31
Navy	19	7	3	29
Marine Corps	18	6	4	82
Air Force	14	3	3	20
Total DOD	20	5	3	28

^aOther minorities include Eskimos, Aleuts, Native American Indians, Asians and Pacific Islanders

Source: Press release, Office of the Assistant Secretary of Defense, December 22, 1987.

In 1987, 93 percent of recruits had a high school diploma, and another 3 percent had a GED credential.

1) high school graduates with a traditional diploma; 2) graduates with alternative credentials, including GED; and 3) no high school credential.⁵

In the late 1970s, due both to economic factors and to a miscalibration of test scores, the quality of military recruits deteriorated to such a degree that Congress acted.⁶ Legislation in 1980 and subsequent years limited the allowable proportion of new Army recruits without high school diplomas as well as the proportion of all recruits with low military entrance test scores.⁷ This mandate, along with better military pay and stepped-up recruiting, halted the trend. Today, a larger proportion of first-time military recruits have high school credentials than at any time since the mid-1960s (see Figure 1). In 1987, 93 percent of new recruits had a high school diploma, and another 3 percent had a GED credential.⁸

Women recruits have helped bolster the services' record. In 1987, almost all female recruits—99 percent—were high school graduates, compared with 92 percent of male recruits.⁹ The proportion of high school graduates among new recruits in 1987 ranged from 91 percent in the U.S. Army and the U.S. Navy to 99 percent in the U.S. Air Force (Figure 2).

These recruits with high school credentials include both recent graduates who enlisted shortly after high school and graduates who have had some postsecondary experience. In 1987, about 7 percent of all recruits (or roughly 20,400 people) entered the military with some postsecondary education.¹⁰

The proportion of high school graduates among Black recruits has risen in the last 10 years (Table 2). Whereas 62 percent of Black recruits in 1976 had completed high school, 96 percent had done so in 1987.¹¹

In the past, the services did not have a uniform definition of a high school graduate. In fiscal 1988, the services adopted a single method of defining and reporting the educational status of recruits according to the three-tier preference system described above.¹²

Entry test scores also have improved

The services also determine enlistment eligibility on the basis of the Armed Forces Qualification Test (AFQT), which includes four subtests of the Armed Services Vocational Aptitude Battery (ASVAB). AFQT scores are grouped in five categories that range from "high trainability" (I and II) to "well-below-average trainability" (V). The services are prohibited from admitting applicants with Category V scores and are further restricted on the percentage of recruits with scores in Category IV.

Recent trends in AFQT scores of new recruits show that the proportion of all recruits scoring above average (AFQT Categories I and II) has risen from 29 percent during 1977–80 to 41 percent during 1987. During the same period, the proportion of recruits scoring below average (Category IV) dropped from 28 percent to 5 percent.¹³ In 1987, the distribution of AFQT scores was as follows:

AFQT CATEGORY	ARMY	NAVY	MARINE CORPS	AIR FORCE	DOD TOTAL
I	4%	5%	3%	6%	5%
II	34%	34%	35%	43%	36%
III	58%	51%	61%	51%	55%
IV	4%	10%	0%	0%	5%

Source: Office of the Assistant Secretary of Defense, Force Management and Personnel.

Between now and 1992, the military's needed share of male high school graduates will remain roughly constant.

How much competition is there? What the data show

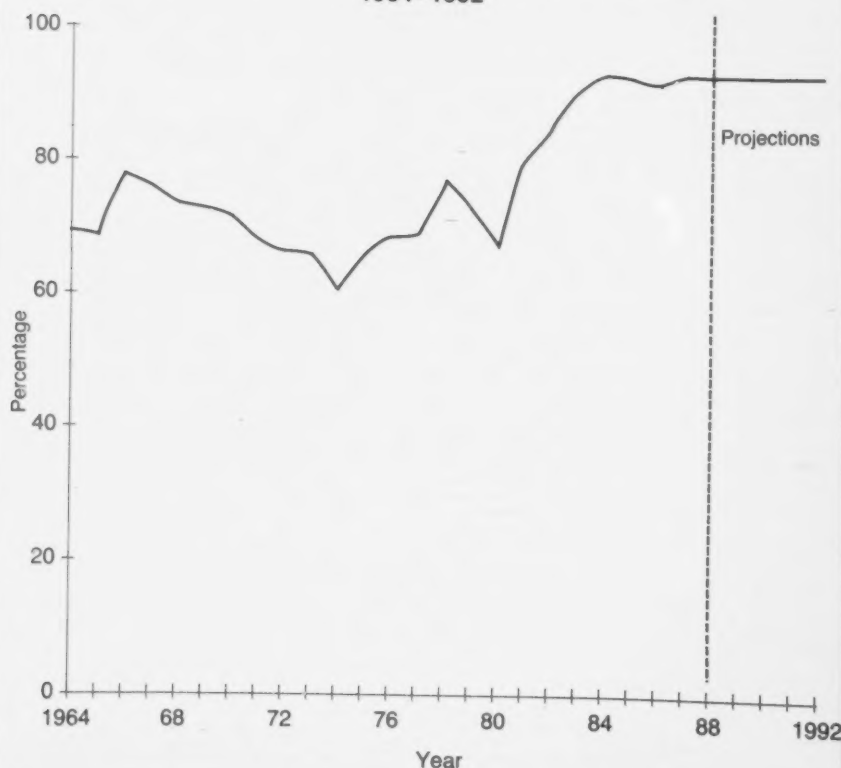
Analysis of the extent of competition between the military and higher education must focus on what we know about the following:

- **Changes in the "pool" of high school graduates, especially males.** There are roughly 225,000 fewer high school graduates today than the 1979 peak of 2,993,900. Between now and 1992, the number will decrease to 2.4 million. The 1988 total of 1.3 million male high school graduates is expected to drop 157,000 by 1992.

- **Changes in the percentage or "share" of high school graduates, particularly males, recruited each year by the armed services.** The military is currently recruiting 10 to 12 percent of recent male high school graduates, compared to 9 percent in 1979. Between now and 1992, the military's needed share will remain roughly constant.

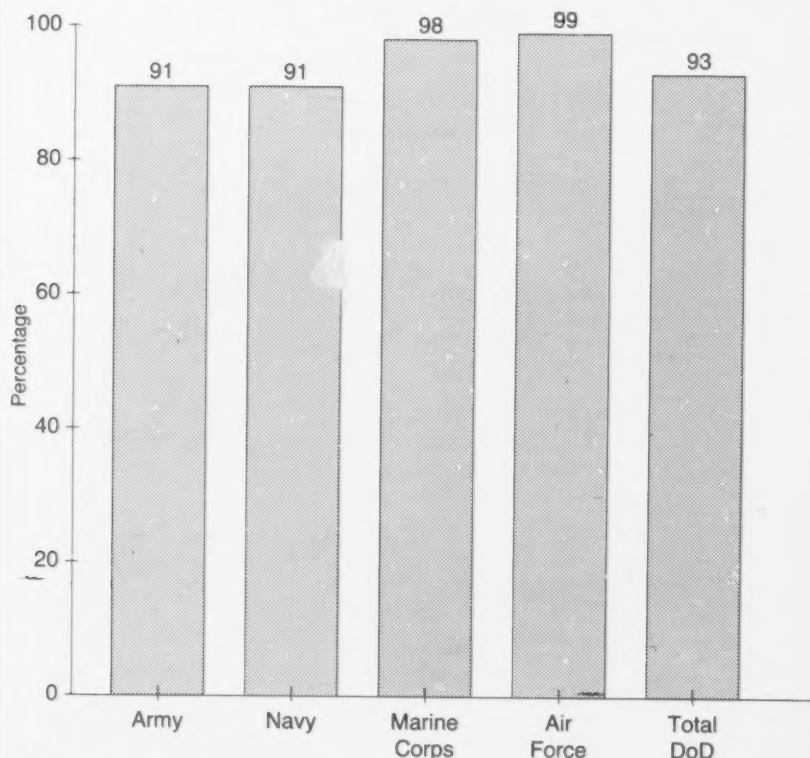
- **Changes in the percentage or "share" of high school graduates, especially males, recruited each year by higher education.** Higher education's share of male high school graduates, much larger than that of the armed services, has increased in the last decade. To enroll the same numbers in 1992 as in 1986, higher education's share

Figure 1.
Percentage of New Recruits That Are High School Graduates, 1964-1992



Source: Office of the Assistant Secretary of Defense, Force Management and Personnel.

Figure 2.
Percentage of New Recruits That Are High School Graduates,
by Service, 1987



Source: Office of the Assistant Secretary of Defense, Force Management and Personnel.

would have to increase from 50 percent to 64 percent.

- **Changes in the employment picture for post-high school youth.** The labor force has drawn a diminishing proportion of male high school graduates; since 1979, the percentage entering the work force has declined from 42 percent to 34 percent.

These factors are discussed in greater detail below. Trends for Black high school graduates are treated separately. It is important to recognize that reliable estimates for the future are simply not possible. As Figure 3 highlights, many different factors shape the reality of college enrollments and military enlistment. Indeed, past projections of military

recruiting needs and college enrollments have proved wrong because almost all of these factors have changed over the last decade.

Changes in the number of high school graduates

The number of high school graduates has decreased from the 1979 peak of 2,993,000 graduates. With an estimated 2,768,000 graduates in 1988 (Table 3), there are 225,000 fewer graduating seniors today than in 1979.¹⁴ Similarly, male high school graduates—the primary pool for military recruitment—dropped from an estimated 1.5 million to 1.3 million young men during this time (Table 4).¹⁵

Table 2
Recruits with High School Diplomas, by Racial Status,
1971, 1976, 1980-1987

Year	Total DOD	White	Black	Other
1971				
HS Grads	254,000	214,100	37,400	2,500
Total Recruits	524,900	447,600	71,900	5,400
1976 ^a				
HS Grads	238,000	191,600	41,700	4,700
Total Recruits	393,500	317,500	67,500	8,400
1980				
HS Grads	231,550	165,150	56,800	9,600
Total Recruits	359,850	265,200	79,600	15,050
1981				
HS Grads	259,000	192,850	54,750	11,400
Total Recruits	327,700	252,650	61,850	13,200
1982				
HS Grads	253,970	190,650	52,650	10,670
Total Recruits	305,800	236,000	57,450	12,350
1983				
HS Grads	268,650	206,500	51,000	11,150
Total Recruits	304,950	237,350	54,700	12,900
1984				
HS Grads	280,500	213,750	53,500	13,250
Total Recruits	309,800	238,250	56,550	15,000
1985				
HS Grads	276,150	208,500	53,550	14,100
Total Recruits	301,400	229,900	55,750	15,750
1986				
HS Grads	283,300	211,250	57,000	15,050
Total Recruits	315,250	238,050	59,900	17,300
1987				
HS Grads	277,200	206,200	56,400	14,700
Total Recruits	297,300	223,200	58,600	15,500

^a1976 was a transition year in shifting to a new fiscal year calendar. An extra quarter is included here.

Source: Office of the Assistant Secretary of Defense.

Figure 3 Why the Estimates Can be Wrong

Projections for high school graduates are subject to change:

- In-migration
- Changes in graduation rates
- Underreporting of data from private high schools

Colleges can maintain enrollment levels other than with 18-year-olds:

- Increased enrollments from older age-groups
- More foreign students
- More upper-division or graduate students
- Increased retention

Military recruitment needs for 18-year-old men vary according to:

- Decisions about the total size of the armed forces
- Changes in reenlistments
- Changes in retention/attrition on initial tour of duty
- Changes in recruitment of women
- Changes in the age distribution of recruits
- Decisions about needed number of high school graduates

The employment picture affects military recruitment:

- Pay differentials, military vs. civilian
- Unemployment rates
- Decline of jobs in certain industries

Between now and 1992, further decreases are projected; the latest estimates show that high school graduates will hit a low point in 1992, at 2,441,000 graduates. Young men graduating from high school in 1992 are estimated to total 1,172,000. If these estimates prove accurate, there will be 157,000 fewer young men graduating from high school in 1992 than in 1988.¹⁶

Clearly, the pool of potential recruits for both the military and higher education is smaller today than in 1979. The decrease in high school graduates has been moderate so far, a

Table 3
Number of High School Graduates in the U.S., Actual and Projected, 1979-1992

Year	Graduates
1979	2,992,802
1980	2,913,997
1981	2,907,091
1982	2,894,371
1983	2,789,511
1984	2,682,014
1985	2,597,957
1986	2,650,442
Projections	
1987	2,695,102
1988	2,768,189
1989	2,732,584
1990	2,594,438
1991	2,473,947
1992	2,440,786

Source: *High School Graduates: Projections By State, 1986 to 2004*, jointly published by the Western Interstate Commission for Higher Education, The College Board and the Teachers Insurance and Annuity Association, 1988; and previous WICHE tabulations.

drop of about 8 percent over nine years' time. In contrast, the decreases expected between now and 1992 are sharper, a 12 percent drop over four years' time.

The military's share of high school graduates

As noted earlier, the military has drawn proportionately more high school graduates to its ranks during the same period in which the number of graduates has been decreasing. Today, and for the near future, 93 percent of each year's recruits are expected to be high school graduates. This contrasts with 73 percent of all recruits in 1979.¹⁷

Table 4 presents estimates of the number of male high school graduates recruited by the armed services since 1979 and the number that will be needed each year through 1992.

There will be 157,000 fewer young men graduating from high school in 1992 than in 1988.

The military's share of male high school graduates has risen from 9 percent in 1979 to between 10 and 12 percent in 1987.

(These estimates are based on actual numbers provided by the Pentagon for male high school graduates, male recruits aged 17 to 19, and male recruits who are high school graduates—as well as projected numbers of all high school graduates.) It shows that since 1979, the number of male high school graduates entering the military has increased from 192,000 to 241,000. Of these recruits, the number of male high school graduates who were 17- to 19-years old (in other words, **recent** high-school graduates) has risen by 10,000, from an estimated 139,000 in 1979 to 149,000 recruits in 1987. This increase has meant that the military's share of male high school graduates has risen, from 9 percent in 1979 to between 10 and 12 percent in 1987. However, that 10,000 represents a

very small proportion of the number of male high school graduates in a given year (in 1987, for example, less than 1 percent).

Between now and 1992, the Pentagon intends to maintain the current level of 93 percent high school graduates among its recruits. Total recruits are expected to range from 270,700 to 297,700 during these years—lower than the last three years, and women recruits are expected to account for up to 13 percent of recruits.¹⁶ Thus, the corresponding number of male high school graduates that the services must recruit during each of these years will probably range from 212,000 to 241,000. Of these young men, it is estimated that between 131,000 and 149,000 will be 17- to 19-years old. As Table 4 shows, this

Table 4
Male Recruits 17- to 19-Years-Old Who Are High School Graduates,
as a Percent of All Male High School Graduates, 1979–1992

Year	Total Male Recruits, HS Graduates	17- to 19-Year Old Male Recruits, ^a HS Graduates	Total Male HS Graduates	Recruits ^d As a Percent of All Male HS Graduates
1979	191,543	138,677	1,523,000	9.1
1980	200,995	140,495	1,491,000	9.4
1981	226,091	152,837	1,483,000	10.3
1982	228,316	146,807	1,474,000	9.9
1983	241,958	150,498	1,437,000	10.5
1984	253,531	147,555	1,331,040 ^b	11.1
1985	241,303	148,884	1,287,840 ^b	11.6
1986	250,923	156,325	1,271,100 ^b	12.2
1987	241,108	149,486	1,293,650 ^b	11.5
Projections				
1988	212,400 ^c	131,688	1,328,730 ^b	9.9
1989	229,300 ^c	142,166	1,311,640 ^b	10.8
1990	241,000 ^c	149,420	1,245,330 ^b	11.9
1991	221,400 ^c	137,268	1,187,490 ^b	11.5
1992	232,900 ^c	144,398	1,171,580 ^b	12.3

^aCalculated on the basis of the proportion of male recruits that are 17- to 19-years-old in each year.

^bThese estimates assume that the proportion of male and female high school graduates remains constant at 48 percent and 52 percent, respectively. Projections for all male high school graduates are based on total high school graduates projected by the Western Interstate Commission for Higher Education.

^cProjections provided by the Directorate for Accession Policy, Office of the Assistant Secretary of Defense.

^dEstimates in Tables 4 and 5 differ slightly based on different sources.

Source: *Population Representation in the Armed Services, FY 1985*, and unpublished data, Office of the Assistant Secretary of Defense; *Digest of Education Statistics, 1987*, Center for Education Statistics; and *High School Graduates: Projections By State, 1986 to 2004*, Western Interstate Commission for Higher Education, 1988.

number represents no sizable further increase (either in number or percentage) in male graduating seniors sought by the military. With some fluctuations, the military's share of male high school graduates in 1992 will remain roughly at the 12-percent level.

Overall, the armed services have somewhat increased their share of male high school graduates since 1979; the increase, however, is small both in numbers and as a percentage of recent graduates. Between 1979 and the mid-1980s the military recruited an additional 10,000 males from each year's high school graduates. By comparison, the military expects to recruit at least 8,000 fewer male high school graduates in 1992 than today. These trends notwithstanding, the military absorbs a relatively small percentage of each year's crop of more than 1 million male high school graduates.

Changes in the collegiate share of graduates

Since 1979—despite demographic predictions to the contrary—higher education enrollments have remained steady or increased slightly. Total undergraduate enrollments in 1987 are projected to be 10,895,000, compared to a level of 9,998,000 in 1979.¹⁹

Higher education has also increased its overall share of male high school graduates during this period. Bureau of Labor Statistics data show that, among male high school graduates, 50 percent enrolled in college in 1986 compared to 46 percent in 1979 (Table 5). Further, there was no overall decrease in the number of male high school graduates enrolling in college between 1980 and 1986.

For the next few years, if higher education were to continue to enroll the same numbers of male high school graduates—about 750,000 in 1986—the collegiate share of each graduating class would need to increase dramatically. By 1992, when 1,172,000 males are projected among high school graduates, it would be necessary for higher education to attract 64 percent of graduating young men. If, instead, the same percentage as today were to enroll (i.e., 50 percent), colleges could expect to enroll about 586,000 male high school graduates in 1992, 164,000 fewer than today. This represents about 1 percent of college enrollment and 7 percent of a year's first-time freshman enrollment.

Colleges have various strategies to cope with such a prospect. They might maintain enrollments by recruiting more students from other age groups, more women or more foreign



U.S. Navy

On the narrow issue of competition between the military and higher education, these projections suggest that demographics, not military recruiting, poses the greater challenge to higher education.

students, or, instead, plan for reduced enrollments. But on the narrow issue of competition between the military and higher education, these projections suggest that demographics, not military recruiting, poses the greater challenge to higher education: the military expects to recruit about the same number or a smaller number of young men than currently. This is insignificant compared to the 164,000 young men that higher education either must attract or learn to live without.

Changes in the share of graduates in the work force

Much of the debate on the extent of competition between the military and higher education has ignored the other major path that high school graduates pursue after leaving school—the world of work. In fall 1986, only half of male high school graduates enrolled in college. Of the others, most were in the civilian work force, either employed or unemployed. Black and Hispanic high school graduates were more likely

than their white peers to be in the work force while not enrolled in school.²⁰

As Table 5 shows, the employment sector has attracted a decreasing share of high school graduates over the last decade. The percentage of **male** high school graduates who were in the work force in 1986 was 34 percent, down from 42 percent in 1979. This pattern of declining youth participation reflects the unfavorable job market reported in recent years for post-high school youth as a result of economic recessions.²¹

Taken together, then, it appears that both the colleges and the military have gained "share" at a time when the employment sector was experiencing slack demand for high school graduates (Figure 4).

Black high school graduates: Countervailing trends

Because some of the trends discussed above differ markedly for Blacks, these data are examined separately. The pool of high school graduates as a whole, for instance, has shrunk

Table 5
Male High School Graduates Enrolled in College,
in the Work Force, in the Military, or Elsewhere, October 1979–October 1986
(Numbers in thousands)

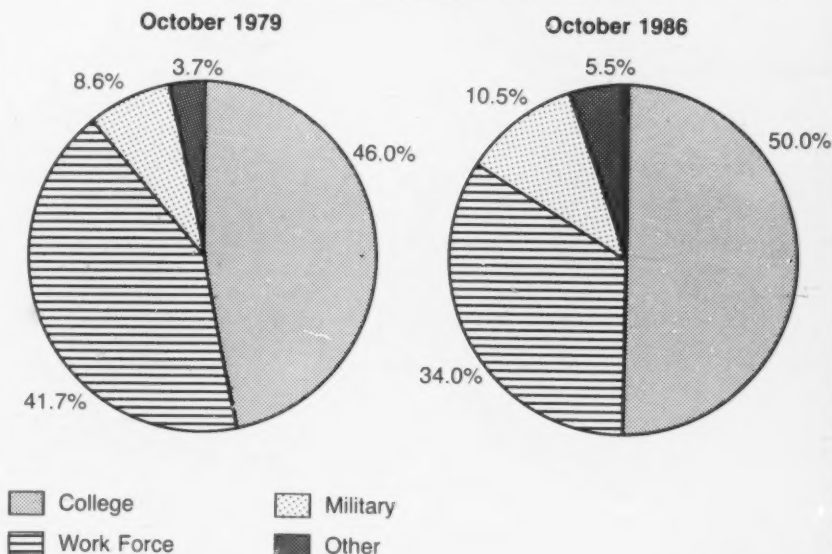
Year	Total High School Graduates			Enrolled in College	%	Not Enrolled					
	Civilian Population	Military ^a	Total			Work Force ^b	%	Military	%	Other	%
1979	1,474	139	1,613	743	46.0	672	41.7	139	8.6	59	3.7
1980	1,500	141	1,641	701	42.7	716	43.6	141	8.6	83	5.1
1981	1,490	153	1,643	816	49.6	586	35.7	153	9.3	88	5.4
1982	1,508	147	1,655	739	44.7	660	39.9	147	8.9	109	6.6
1983	1,390	150	1,540	721	46.8	594	38.5	151	9.8	75	4.9
1984	1,429	148	1,577	800	50.7	564	35.8	148	9.4	65	4.1
1985	1,286	149	1,435	754	52.5	458	31.9	149	10.4	74	5.1
1986	1,331	156	1,487	744	50.0	506	34.0	156	10.5	81	5.4

^aEstimates of male recruits with high school credentials who are 17- to 19-years-old.

^bIncludes employed and unemployed persons.

Source: Bureau of Labor Statistics Labor Force reports, based on Current Population Survey Data, 1980–1986, for data on the civilian population, college enrollment, and work force participation. *Population Representation in the Armed Services, FY 1985*, and unpublished data, Office of the Assistant Secretary of Defense, and ACE calculations, for military participation data.

Figure 4
Recent Male High School Graduates Enrolled in College,
in the Work Force, in the Military, or Elsewhere,
October 1979 and October 1986



Source: Bureau of Labor Statistics Labor Force reports, based on Current Population Survey Data, 1979-1986, for civilian population, college enrollment, and work force participation data; ACE estimates, based on *Population Representation in the Armed Services FY 1985* and unpublished data, Office of the Assistant Secretary of Defense, for military participation data.

since 1979. But the rising high school graduation rate for Blacks has translated into almost 70,000 more Black high school graduates today than in 1979—an increase from 353,000 to 420,000 graduates (Table 6). Similarly, the number of Black males who are high school graduates has risen from 156,000 in 1979 to 202,000 in 1986—an increase of 46,000 Black male graduates (Appendix Table A-4).²²

Thus, the pool of potential Black recruits for both the military and higher education is larger today than in 1979. The pool of Black males has grown by 29 percent.

This expanded pool notwithstanding, higher education's share of Black high school graduates has declined—another trend countervailing that of graduates in general. In October 1979,

41 percent of Blacks (male and female) who graduated in 1979 were enrolled in college; in October 1986, the corresponding figure was 36 percent. The comparison between white males and Black males is particularly significant:

- The proportion of white male high school graduates enrolled in college in the October following graduation rose from 48 percent in 1979 to 53 percent in 1986.
- During the same period, the proportion of Black male high school graduates who enrolled in college dropped from 33 percent to 28 percent (Figure 5).

In terms of "share," the military is also attracting a smaller percentage of recent Black male graduates. About 14 percent of recent Black male gradu-

ates entered the armed services in 1986, compared with 21 percent in 1979 (Figure 5).

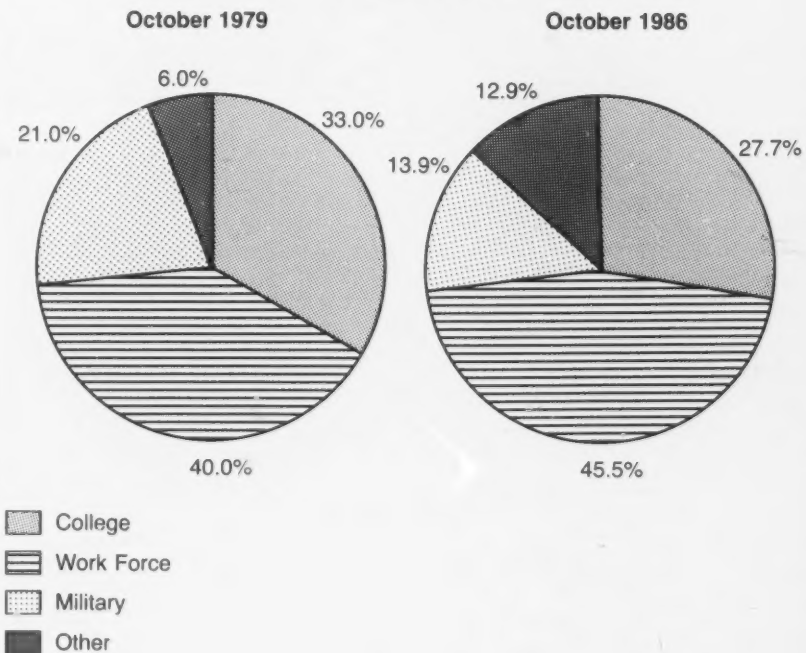
This decrease in the military's "share" of Black male high school graduates—not generally recognized—has occurred for several reasons:

- First of all, the services have enlisted a relatively constant number of Black high school graduates in recent years. As Table 2 shows, the number of high school graduates among Black recruits totaled 56,800 in 1980 and 57,000 in 1986. Most of these—about 83 percent today—are male.

- Second, as already noted, this stable number of Black male recruits with high school diplomas has been taken from an expanding pool of Black male high school graduates.

- Third, the services have expanded their recruiting of high school graduates over 19 years of age. The numbers of **older** Black recruits with high school diplomas and of recruits who enter the military with some college experience have increased since 1979. In turn, the number of Black recruits aged 17- to 19-years old who are high school graduates has actually decreased.

Figure 5
Recent Black Male High School Graduates Enrolled in College, in the Work Force, in the Military, or Elsewhere, October 1979 and October 1986



Source: College enrollment and labor force participation data are based on the Census Current Population Surveys as reported annually by the Bureau of Labor Statistics. Military participation data are derived from Department of Defense reports and ACE estimates of recruits aged 17 to 19 who are recent high school graduates.

See Table A-4 for greater detail.

Blacks remain overrepresented among enlisted military personnel and are more likely than whites to plan military service after high school.

Table 6
Black High School Graduates
in the
Civilian and Military Populations,
October 1979–October 1986
(Numbers in thousands)

Year	Civilian Population	Military Population	Total
1979	317	36	353
1980	354	36	390
1981	358	35	393
1982	384	33	417
1983	392	31	423
1984	438	30	478
1985	333	32	365
1986	386	34	420

Source: For the civilian population, Bureau of Labor Statistics School Enrollment and Labor Force Status reports, 1980–1986, taken from *Monthly Labor Review*, various issues; for the military population, estimates are based on tabulations provided by the Directorate for Accession Policy, Office of the Assistant Secretary of Defense.

Even with this drop in “share,” Black males are still more likely than their white peers to enter military service after high school. In 1986, for example, 14 percent of Black male high school graduates entered the military, compared to 10.6 percent of all male high school graduates.

Nevertheless, Blacks still remain overrepresented in the full roster of enlisted military personnel. This pattern is likely to continue: a recent study of plans and aspirations of high school seniors showed that between 1976 and 1985, an increasing percentage of both blacks and whites planned to enter the armed forces (Figure 6), but the rate of increase in such plans was greater among Black seniors than among white youth.²³

Trends in the labor force participation of Black high school graduates, particularly males, help account for the losses of share by both the military and higher education. In contrast to the trend for high school graduates in general, between 1979 and 1986, the

proportion of Black male high school graduates in the work force (both employed and unemployed) rose from 40 percent to 46 percent (Figure 5).

It should be noted, however, that not all of these graduates are working. According to a recent report from the W.T. Grant Foundation, in 1986 only 49 percent of Black high school graduates under age 20 who were not enrolled in college were working; of those, only 45 percent had found full-time employment.²⁴ And, indeed, Bureau of Labor Statistics data on the employment status of Black male high school graduates show that from 1979 to 1986, unemployment among those not enrolled in college rose from 31 percent to 42 percent.²⁵

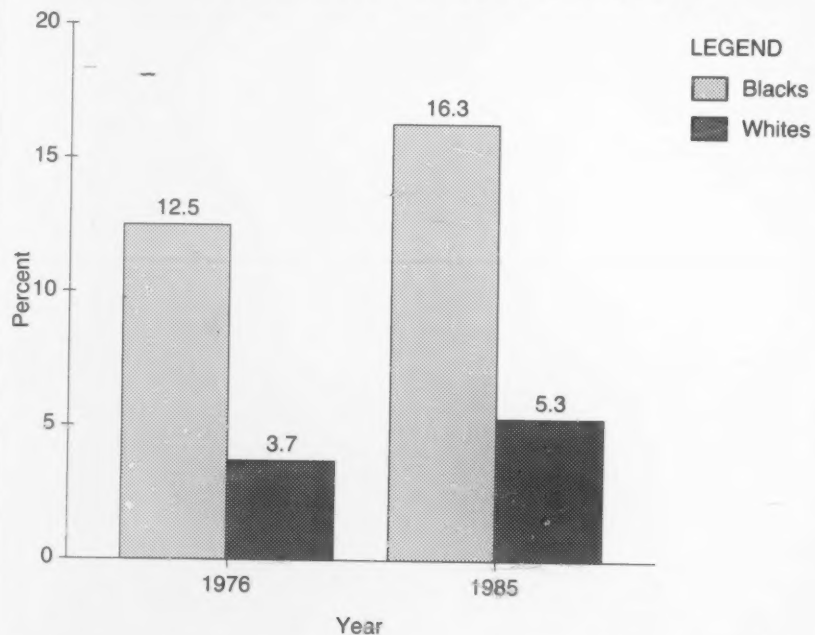
As Figure 5 also shows, there has been a significant increase in the percentage of Black male high school graduates who are neither enrolled in college, nor in the military, nor in the labor force. This “other” category, according to the Bureau of Labor Statistics, could include persons enrolled in vocational/technical schools as well as persons neither enrolled nor actively looking for work.

Projections of Black high school graduates

There are several possible scenarios concerning future numbers of Black high school graduates. Graduation rates for Blacks have been on the rise in recent years. Should rates continue to increase, they would offset partially the expected 7 percent decrease in the number of Black 18- and 19-year olds between 1987 and 1992.²⁶ If graduation rates remain the same, there will be 25,000 fewer Black high school graduates in 1992. Currently, a year's crop of high school graduates represents 34 percent of all Black 18- and 19-year olds.²⁷

If higher education were to enroll the same number of Black male high school graduates in 1992 as in 1986, its share of those graduates would have to increase slightly, from 28 per-

Figure 6
Percentage of Seniors Who Say They "Definitely" Plan
to Enter the Armed Forces After High School, 1976 and 1985



Source: Robert M. Hauser, "Post-High School Plans of Black High School Graduates: What Has Changed Since the Mid-1970s?", University of Wisconsin, 1987.

cent to 30 percent. If the armed services were to recruit the same number in five years, their share would also have to increase only marginally, from 14 percent to 15 percent.

The near-term prospect of increased competition, therefore, appears unlikely. Furthermore, if high school graduation rates for Black males continue to rise, both the military and higher education could maintain their current recruiting levels without any increase in "shares."

Overall, these data indicate a persistent counter-trend for Black, particularly male, high school graduates. Both the military and higher education are taking smaller shares of these graduates, while the proportion claimed by the labor force and by "other" activities has risen. So, too, in the future, both higher education and the military are unlikely to experience

any change in their respective shares of Black males graduating from high school each year.

How much competition is there? Interpreting the data

Are the armed services and higher education truly competing? Do they increasingly draw from the same youth pool? As this review of available information demonstrates, the facts of the situation are complex and do not provide a clearcut answer. Fair conclusions can be drawn that both support and contradict the claims of competition.

Arguments against competition start from a recognition that the military's "share" of male high school graduates is still relatively small. Al-

Over the past decade, it appears that both the colleges and the military have cast their nets more widely but, at least in aggregate terms, have not cut into each other's share of high school graduates.

though it has increased in the past decade, the military's current 10 to 12 percent share is much smaller, certainly, than the predictions in the late 1970s that the military would require one-third or one-quarter of male high school graduates. These earlier predictions were based on the assumption that the military relies solely on 18-year-olds to meet recruiting goals; in fact, only four in 10 recruits today are 17- or 18-years old.²⁸

Taken together, colleges and the military account for the chosen destinations of about 60 percent of male high school graduates in a given year. Other young men get jobs, sign up for vocational-technical training, or become unemployed. Over the past decade, it appears that **both** the colleges and the military have cast their nets more widely but, in aggregate terms, have not cut into each other's share of high school graduates. The share of high school graduates has decreased only among those going directly into the work force.

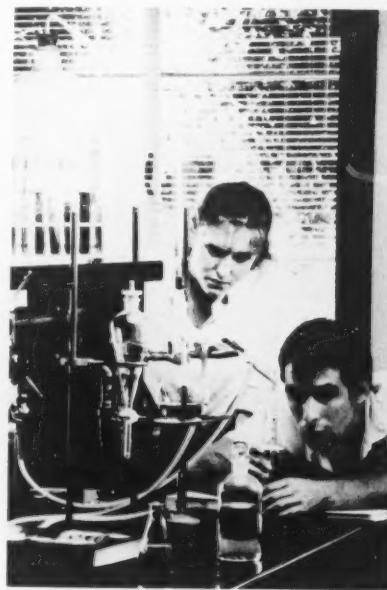
Black youth remain overrepresented among military enlisted personnel and underrepresented in higher education. In recent years, the percentage of Black male graduates entering college has decreased, contrary to the pattern for whites. This decline in college attendance for Blacks, however, can scarcely be laid at the door of the military: during the same period, the services also have attracted a smaller proportion of Black male high school graduates.

The arguments for competition are indirect. Most analyses have looked at general figures on characteristics of the entire armed forces or of all new recruits rather than focusing on evidence for competition among male high school graduates. If there is increased competition in specific settings, the statistical evidence indicates that competition has not affected the overall "shares" of each sector in the last decade. Depending on how higher education responds to continuing demographic change, the prospect

of competition may increase, but there is no guarantee that this will happen.

As a recent article suggests, military recruiting in the 1980s has been aided by rising unemployment rates for young men and continuing poor employment opportunities for high school graduates.²⁹ If these trends continue, the military and higher education could continue to gain "share" at the expense of the employment sector. However, increased demand in the future for a shrinking pool of entry-level workers could intensify the natural forces of competition between businesses, the armed services, and higher education.

The military has long argued that it competes with the employment sector more than with colleges. That is, the services recruit young people who are undecided about their plans or who are unlikely to go to or stay in college. Although today's recruits are more likely to be high school graduates than before, some military officials believe that most recruits do not have the preparation or motivation for full-time college study. These perceptions are borne out by research findings of



It may well be that the old pattern in which colleges and the military 'worked opposite sides of the street' is being eroded because the financial barriers to higher education are increasing.

the High School and Beyond study that show that propensity for military service is inversely related to academic performance.³⁰

However, anecdotal evidence supplied by recruiters suggests that, in recent years, some recruits who do have the skills to pursue postsecondary education often enlist because they do not have the resources to pay for college. The Army's own surveys document that, among the ablest Army recruits, the availability of aid for college is a primary reason for enlistment.³¹

It may well be that the old pattern in which colleges and the military "worked opposite sides of the street" is being eroded because the financial barriers to higher education are increasing, especially in young people's perceptions. Recent changes in the composition of federal student aid—the shift from grants to loans, and the loss of purchasing power in several key programs—are likely to have affected student perceptions about the feasibility of undertaking college study.³² Coupled with the services' intense promotion of military education benefits, these circumstances may exert a strong influence on the propensity for military service among young men graduating from high school.

This may be especially significant in view of recent reports about the disaffection of Black youth who doubt the economic value of a college degree.³³ For many of these students, military service may represent one of the only options for earning enough to pay for college tuition. The Army reports, for example, that Black soldiers entering the Army are signing up for education benefits under the New GI Bill at rates that are proportionate to their numbers.³⁴

Policy debate would be well served by a study of the reasons on which young people base their post-high school decisions. The military adver-

tising and recruitment campaigns may, indeed, influence the decisions of some young men who enlist in the military, but there currently is no way to know whether they considered enrolling in college or instead would have looked for employment. Another question is whether college study is becoming less attractive, especially to low-income groups. As one analyst has suggested in considering the decline in Black college enrollment, colleges may have to work harder to ensure attractive employment for their graduates if they wish to enroll many lower-income persons.

In sum, the present analysis offers no evidence that competition between the armed services and higher education has affected their relative "shares" of high school graduates. This conclusion differs from those others have reached, particularly with regard to Black males. Solomon Arbeiter of the College Board has suggested that the military is siphoning off Blacks with college potential.³⁵ His analysis, however, looked at changes in the composition of the entire active duty force; this analysis has focused instead on comparing each year's "crop" of high school graduates with each year's crop of military recruits.

As this section has suggested, the extent and effects of competition between the military and higher education are subject to varying interpretation. We conclude that there has not been significant competition in the last decade. For the near future, amid continuing demographic decline and further erosion in the affordability of a college, competitive pressures may increase. Nevertheless, as succeeding sections show, any potential "losses" of college-age youth to military service are likely to be small and more than offset by the extent to which the military "brings business" to higher education in the form of enrollments by military personnel and veterans.



U.S. Navy



Participation by Military Personnel in Postsecondary Education

Military personnel are substantially involved in pursuing voluntary postsecondary education, that is, off-duty study apart from any military training. Figure 7 offers a partial look at the extent of that involvement. In 1987, service personnel were enrolled in at least 778,000 courses at the postsecondary level.

The services not only allow but actively encourage the pursuit of voluntary education by providing tuition assistance to active duty personnel (and reserve personnel, in the case of the Army). The policies, which vary by branch of service, length of service, and rank are changing somewhat, but generally the military picks up 75 percent of tuition costs for approved courses. Servicemembers use this assistance to enroll in courses at schools, colleges and universities near their duty assignments.

Most of the courses taken with tuition assistance are at the postsecondary level; only about 1 percent would be considered basic skills courses.³⁶

Institutional network supports educational opportunities

The network that links military personnel and postsecondary institutions is vast; enlisted personnel have ample opportunities for off-duty postsecondary education. Voluntary education takes place worldwide at or near more than 475 installations. More than 600 colleges and universities provide educational services. For the one-quarter of active duty military personnel who serve abroad, the programs are provided by academic institutions under contract to the individual services.

The University of Maryland, for instance, now provides all liberal arts and general education courses at Air Force installations in Europe. In fact, Maryland and two other institutions—the City Colleges of Chicago and Central Texas College—now account for roughly 25 percent of all enrollments with tuition assistance.³⁷

The Servicemembers Opportunities Colleges, known as SOC institutions, are a group of more than 475 colleges and associations cooperating to provide credit courses for servicemembers and their families. These institutions have agreed to flexible procedures for admissions, transfer of credits, acceptance of credits for military learning, and residency requirements. Of the SOC schools, more than 80 institutions offer programs tailored to Army and Navy personnel that lead to an associate or baccalaureate degree (referred to as SOCAD, SOCNAV, and BDFS, or Bachelor's Degree for Soldiers) and to date, roughly 40,000 military personnel have enrolled in these programs.³⁸

Air Force personnel are eligible to enroll in the Community College of the Air Force (CCAF), an accredited institution that offers 86 programs leading to an associate degree in applied science. CCAF in 1986 awarded about 9,100 degrees and enrolled 79,877 new degree candidates.³⁹ Air Force officials and community college officials contend that CCAF generates enrollments at civilian postsecondary institutions, because every degree candidate must take 24 semester hours of general education requirements that CCAF cannot provide.

Servicemembers in 1987 enrolled in more than 778,000 postsecondary-level courses; these figures probably understate total participation in postsecondary education.

The scope of postsecondary study

The entire scope of postsecondary-level study by enlisted, active duty servicemembers is difficult to ascertain, in part because of differences in data collection among the services. To date, information has been available on the number of courses taken, not on the number of enrollees.

As Table 7, which focuses on courses, shows, servicemembers in 1987 enrolled in more than 778,000 postsecondary-level courses. In most cases the figures reflect only those courses taken with the aid of tuition assistance or veterans' benefits; thus, they slightly understate participation in postsecondary education.

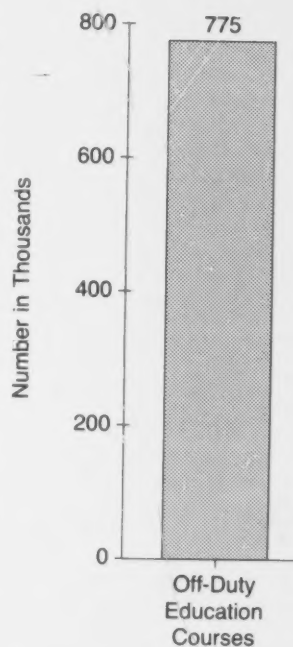
Estimates of the number of persons enrolled suggest a similar level of participation. The Air Force estimates that about 125,000 enlistees are involved in voluntary postsecondary education; according to the Navy, about 89,000 Navy personnel are pursuing postsecondary courses. The Army estimates that between 20 percent and 25 percent of the 780,000 Army personnel, or up to 195,000 persons, are pursuing postsecondary education. Taken together, these estimates total more than 400,000, and they probably are an underestimate of postsecondary participation of active duty personnel. Even so, these numbers would account for about 3 percent of the current enrollment in higher education.

Apart from courses provided by educational institutions, servicemembers can also complete courses of independent study and earn college credit for service school courses and military training through external evaluations or standardized examinations. In 1987, according to the Defense Activity for Nontraditional Education Support (DANTES), the services reported 2,417 enrollments in independent study. Roughly 100,000 credit examinations are administered

annually, and about 60 percent of these result in the awarding of college credit. DANTES recently estimated that on the basis of the credit evaluations contained in the ACE Guide, military personnel earned about 400,000 semester hours per year for military learning and proficiency that could be transferable to college programs.⁴⁰

These numbers do not include enrollments in external degree programs, of which there are many (DANTES lists 40 programs with no residency requirements). In New York's Regents College, alone, for instance, 2,871 military personnel are currently enrolled and 16,848 have earned degrees since 1972.⁴¹

Figure 7
Postsecondary Education
Activity of Military Personnel,
1987



Source: Office of Assistant Secretary of Defense and Veterans Administration.

Table 7
Postsecondary Course Enrollments^a by Active Duty Personnel,
by Service and Level of Study, 1987

	Undergraduate	Graduate	Total
Army	220,231	27,040	247,271
Navy-	114,173	5,674	119,847
Air Force	309,690	69,785	379,475
Marine Corps	29,052	2,952	32,004
Total DOD	673,146	105,451	778,597

^aFigures given are numbers of courses taken, not number of enrollees.

Source: "Voluntary Education Fact Sheet, FY 1987," Office of the Assistant Secretary of Defense, Force Management and Personnel, Defense Activity for Nontraditional Education Support (DANTES), June 1988.

Postsecondary enrollments have risen in recent years

Both the Air Force and the Army report increases in the number of servicemembers enrolling in postsecondary education. In the Army, the total number of postsecondary enrollments has risen from 181,686 courses taken in fiscal 1983 to 247,271 in fiscal 1987—an increase of 36 percent. Between 1986 and 1987 alone, course enrollments rose 7 percent, according to the Army.⁴²

The Air Force estimates that since 1977, enrollments have increased about 15 percent. These increases have occurred amid a 5 percent decrease in total Air Force personnel.⁴³

Whether this trend of enrollment increases will continue is contingent on the availability of tuition assis-

tance. Recent budgetary constraints already have impelled the services to lower their tuition reimbursement rates from 90 percent to 75 percent, and in several cases to set caps on the dollar amount and the number of courses that will be covered.

For fiscal 1988, for instance, internal budget reallocations have severely strapped the Army's tuition assistance budget—to the extent that the largest installations may run out of funds before September 30, the end of the fiscal year.⁴⁴

Degree completions also on the rise

More than 19,000 servicemembers in 1987 obtained associate degrees; about 6,000 obtained the baccalaureate and roughly 7,000 earned a gradu-

Table 8
Degrees Earned by Military Personnel, by Branch of Service, 1987

	Army	Navy	Marine Corps	Air Force	Total DoD
Associate	7,103	971	316	10,887	19,277
Bachelor's	1,232	693	1,261	2,851	6,037
Graduate	1,734	1,204	320	3,761	7,019

Source: "Voluntary Education Fact Sheet, FY 1987," Office of the Assistant Secretary of Defense, Force Management and Personnel, Defense Activity for Nontraditional Education Support, June 1988.

These data suggest a pattern of robust, sustained participation by military personnel in postsecondary education.

ate degree (Table 8). In addition, more than 12,000 obtained either a high school diploma or a GED credential.

Between fiscal 1980 and 1986, the total number of degrees awarded to Army personnel increased 9 percent and the number of associate degrees increased 26 percent. The increase in the number of associate degrees awarded to Army personnel is at least partially attributable to the growth of the SOCAD program. The number of soldiers signing a SOCAD agreement for an associate degree program at a participating SOC institution has risen dramatically, from 985 in fiscal 1982 to 8,761 in fiscal 1986.⁴⁵

In sum, the services both allow and encourage postsecondary study, in diverse forms—through classroom work, independent coursework, and credit by examination. The number of

enrollments is substantial; the best estimate is at least 400,000 military personnel enrolled during active duty. A significant number of degrees, especially at the associate level, are awarded to servicemembers every year. Recent trends in enrollments and degrees conferred show the services have supported growth in voluntary education programs.

Taken together, these data suggest a pattern of robust, sustained participation by military personnel in postsecondary education. This phenomenon has occurred despite reductions in the size of the armed forces in the post-Vietnam era. It remains to be seen how severely the new austerity will dampen opportunities for servicemembers to enroll in postsecondary courses with tuition assistance benefits.



U.S. Navy



The New GI Bill and College Enrollment of Veterans

Education benefits prove incentive for enlistment

Many 18- to 24-year olds are enlisting in the military to obtain the new and expanded education benefits available to veterans. And the basic benefits are substantial: the New GI Bill (named the Montgomery GI Bill after its congressional sponsor, S.V. Montgomery of Mississippi) provides up to \$10,800 in basic benefits for a three-year enlistment, including a \$1,200 contribution by the enlistee.⁴⁶ Lesser benefits are available to members of the Selected Reserve, who under the Montgomery GI Bill qualify for GI Bill benefits for the first time. (For demographic profiles of active duty and reserve personnel, see Figures 8 and 9.)

The Army and the Navy have offered supplemental education benefits, called "kickers." The Army College Fund, for instance, allows an eligible servicemember to earn up to \$14,400 extra, or a total of \$25,200, in return for four years of active duty followed by a reserve commitment. Under the Navy Sea/College Program, recently terminated by Congress, eligible personnel could receive \$8,000 extra for two years of active duty followed by six years in the reserves. (Both these programs are currently under review by a subcommittee of the House Appropriations Committee).

These benefits are primarily used by servicemembers after their release from active duty. As mentioned above, enlisted personnel generally rely on tuition assistance to enroll in courses while in the service.

GI bill participation is running high

Less than three years after its implementation, enlisted servicemembers

are signing up for the Montgomery GI Bill (see Figure 10) at rates well above those of previous contributory benefit programs. Participation in the Veterans Educational Assistance Program (known as VEAP), the post-Vietnam program, was about 45 percent of all eligible personnel.⁴⁷ In March 1988, the enrollment rate for the Montgomery GI Bill—a preliminary indicator of

Figure 8 A LOOK AT THE ACTIVE DUTY FORCE

Total force: **2.16 million**

Officers: **309,717**

Enlisted: **1,845,164**

Academy cadets: **13,299**

First-time enlistments in 1987:
297,337

Percent of enlisted personnel that are:

Female—**10.2%**

Black—**21%**

Hispanic—**4.1%**

Percent of officers that are:

Female—**10.3%**

Black—**6.5%**

Hispanic—**1.7%**

Educational background of enlisted personnel:

Graduate degree—**Less than 1 percent**

Bachelor's degree—**2.2%**

Some college—**16.3%**

High school diploma or GED—**78%**

No high school credential—**3%**

Unknown—**Less than 1 percent**

Educational background of officers:

Graduate degree—**34%**

Bachelor's degree—**54.4%**

Less than bachelor's degree—**5.2%**

Unknown—**6.4%**

The Veterans Administration projects that the use of Montgomery GI Bill benefits will increase dramatically in the next five years.

Figure 9 A LOOK AT THE SELECTED RESERVE*

Total force: **1.1 million**

Total new enlistments in 1987:
243,466

Percent of 1987 enlistments that are:

Female—**14%**

Black—**20%**

Educational background of
reservists (1987):

Graduate degree—**Less than 1%**

Bachelor's degree—**3%**

Two years of college—**3%**

High school diploma—**59%**

Alternative high school
credential—**6%**

No high school credential—**18%**

Unknown—**9%**

Number that are:

First-time enlistees—**108,386**

Prior service enlistees—**135,080**

*Persons in the reserve generally serve one weekend per month, as well as several weeks per year.

potential participation levels—averaged more than 80 percent, ranging as high as 92 percent in the Army. Figure 11 shows that in fiscal 1987, the average Montgomery GI Bill participation rate was 69 percent. Since the program began in July 1985, about 483,000 personnel, or 65 percent of the 744,000 eligible, have signed up for the Montgomery GI Bill.⁴⁶

The Air Force reports that enlistees are signing up for these benefits at four times the rate for VEAP, the predecessor program. The Navy reports that the participation rate for the New GI Bill is currently twice that for VEAP. The Coast Guard reports that as of December 1, 1987, participation is averaging 63 percent.

Projections for use of the Montgomery Bill

Rates at which enlistees sign up for the program provide only general indicators of the eventual use of educa-

tion benefits by participants. The experience of previous veterans education programs offers other guidance.

The Veterans Administration, taking into account differences between the new and old programs, has developed projections on likely use of new GI bill benefits that are shown in Table 9.⁴⁹ These projections, based on the assumption that a high percentage of Montgomery GI Bill participants will use their benefits, remain somewhat speculative for two main reasons:

- Because the Montgomery GI Bill programs are new, only this year and next will a substantial number of servicemembers begin taking advantage of the benefits.
- Because the Montgomery GI Bill marks the first time that reservists have been eligible for education benefits, there is no previous experience on which to rely in projecting use by reservists.

In addition, rules governing both programs—the Montgomery GI Bill for active-duty personnel and the New GI Bill for reservists—are likely to be modified by legislative proposals pending in Congress.

As Table 9 shows, the VA projects that the use of Montgomery GI Bill benefits will increase dramatically in the next five years. Looking first to veterans who served on active duty, the number using New GI Bill benefits is expected to rise from 10,000 in fiscal 1988 to 193,000 in fiscal 1993, a nineteenfold increase. Sizable yearly increases—of between 16,000 and 57,000 persons each year—are expected, beginning in 1990 and continuing through 1993. Further, large numbers of reservists are also expected to make use of education benefits: the biggest change is forecast for 1988, when 138,000—more than twice the number for 1987—are expected to use education benefits (typically, on a part-time basis). Such extensive use is expected to continue, with 181,800 reservists projected to use education benefits in 1993.

Figure 10
Educational Benefits Under The Montgomery GI Bill

	<u>NEW GI BILL FOR ACTIVE DUTY</u>	<u>NEW GI BILL FOR RESERVE</u>
Law	PL 98-525	PL 98-525
Effective	October 1984	October 1984
Period of Service	July 1, 1985	Servicemembers entering on or after: July 1, 1985
Service Requirement	2 or 3 years active duty	180 days plus completion of initial duty
Period of Eligibility	10 years from separation	Until separation from reserves or 10 years from date first entitled, whichever is earlier
Allowances	\$300/month for up to 36 months in exchange for standard term of service; lesser rate for shorter term of service; plus discretionary supplement of up to \$400/month	\$140/month for up to 36 months
USE OF BENEFITS		
On-the-job Training	Permitted	Not permitted
Correspondence courses	Permitted	Not Permitted
Work-Study	Permitted	Not Permitted
College-level-study	Permitted	Permitted
Non-collegiate Institutions	Permitted	Courses must be taken at institutions of higher learning
Part-time Study	Permitted	At least half-time enrollment required

As the table shows, however, most of these increases are, in effect, a replacement for veterans previously receiving benefits under other programs. Benefits under the old GI Bill effectively expire in 1990, although some veterans will be able to convert their benefits to the Montgomery GI Bill.

It is therefore important to look at the combined effect of all benefit programs, shown on the bottom line of Table 9. Thus, in 1987, the VA estimates that 368,159 veterans were using education benefits under all programs, old and new. Over the next

few years, sizeable net increases are projected:

Year	Total Using Benefits	Yearly Increase
1988	429,400	61,000
1989	455,600	26,200
1990	463,500	7,900

Veterans enrollments are expected to peak in fiscal years 1989 and 1990, followed by some decreases in total enrollments. By 1993, following a phase-out of the old GI Bill and the increases expected under the Montgomery GI Bill, the VA estimates that a

total of 428,900 persons will be using VA benefits for education or training. This number represents a **net increase of 61,000 persons** over the total number using education benefits in 1987.

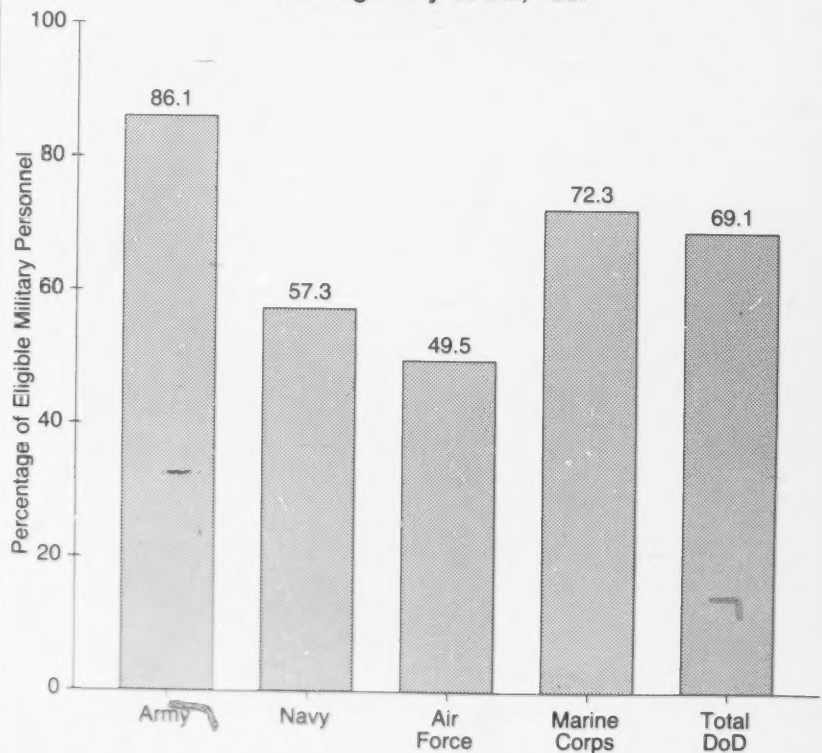
How many will study at two- and four-year institutions?

Colleges and universities are interested in the extent to which veterans will use their education benefits to study at two- and four-year institutions or instead, in other forms of training. Again, program regulations provide some guidelines:

- For active-duty personnel, education benefits can be used by veterans for vocational training, correspondence study, on-the-job and apprentice training, and work-study, as well as study at two- and four-year college and universities.
- Reservists, who are eligible for benefits for the first time, are required to use their benefits at "institutions of higher learning."

Past VA experience offers other information. Under the Old GI Bill, in recent years roughly 80 percent of veterans have used their benefits for col-

Figure 11
Percentage of Eligible Military Personnel Who Enrolled In Montgomery GI Bill, 1987



Source: Education Policy Directorate, Office of Assistance Secretary of Defense, Force Management and Personnel.

lege-level study at two- and four-year institutions, including 11 percent who enrolled for graduate study (Figure 12).

Under VEAP, a much smaller program, close to 90 percent of the 140,000 trainees have enrolled at two- and four-year institutions, including the 6 percent that have pursued graduate-level study (Figure 12). Use of benefits for on-the-job training was not allowed under VEAP until recently.

Based on such factors, it seems

reasonable to assume that (1) following the VEAP experience, 90 percent of benefit users among active-duty veterans will enroll at two- and four-year institutions, and (2) because of program restrictions, all (100 percent) of reservists using Montgomery GI Bill benefits will enroll at two- and four-year institutions. Table 10 shows the resulting projections for the number of veterans likely to use their benefits at two- and four-year institutions over the next five years. Figures in the table

Table 9
Number Using Veterans Education Benefits, Actual and Projected, 1987-1993

Program	Actual 1987	Year Projected					
		1988	1989	1990	1991	1992	1993
Post Korean and Vietnam							
Era GI Bill	238,798	191,400	156,500	87,300	—	—	—
VEAP	76,772	90,000	88,000	80,200	71,400	62,400	53,800
New GI Bill							
Active Duty	130	9,800	25,800	82,500	119,100	157,500	193,300
Reserve	52,459	138,200	185,300	213,500	223,900	174,900	181,800
Total	368,159	429,400	455,600	463,500	414,400	394,800	428,900

Note: Includes all veterans likely to use benefits under these programs. Permitted use varies by program, but generally benefits may be applied to pre-college and higher education, work-study, and on-the-job training.

Source: Information provided by the Veterans Administration, May 1988.

Table 10
Veterans and Reservists Likely to Enroll in College, Actual and Projected, 1987-1993^a

Program	Actual 1987	Year Projections					
		1988	1989	1990	1991	1992	1993
Post Korean and Vietnam							
Era GI Bill	202,508	153,120	125,200	69,840	—	—	—
VEAP	71,738	81,000	79,200	72,180	64,260	56,160	48,420
New GI Bill							
Active Duty	117	8,820	23,220	74,250	107,190	141,750	173,970
Reserve	52,459	138,200	185,300	213,500	223,900	174,900	181,800
Total	326,922	381,140	412,920	429,770	395,350	372,810	404,190

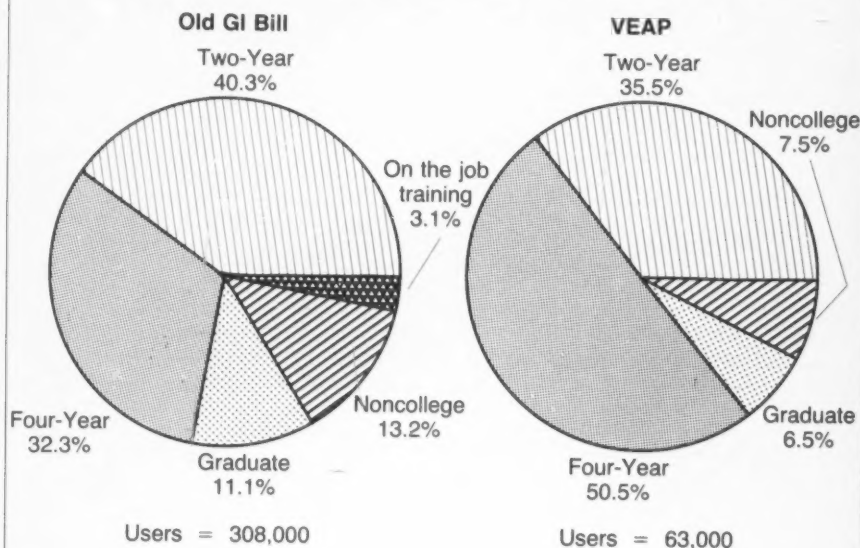
^aIn the past, 80 percent of Vietnam Era GI Bill trainees and 90 percent of veterans training under VEAP have used benefits for college-level study at postsecondary institutions.

On this basis, we have assumed that those patterns will prevail for veterans under those two programs, and that 90 percent of active duty veterans using the New GI Bill will use benefits for college.

For reservists, because of program regulations, all (100 percent) of reservists are expected to use New GI Bill benefits for postsecondary education.

Source: Information provided by the Veterans Administration, May 1988, and ACE calculations.

Figure 12
Use of Benefits Under Old GI Bill and VEAP, by Type of Training, 1986



Source: "Veterans Benefits Under Current Educational Programs, Fiscal Year 1986," Veterans Administration, 1987.

are based on the Veterans Administration's overall estimates, adjusted to include only those likely to enroll at two- and four-year institutions.

About 381,000 veterans and reservists—from all programs—are likely to be enrolled at two- and four-year institutions in 1988. A sizeable increase—of almost 32,000—is expected in 1989, followed by another increase of almost 17,000 in 1990. Thus, in two years' time, enrollments are expected to total 430,000, an increase of 13 percent. Beginning in 1989, the majority of veterans enrolled will be using New GI Bill benefits, and almost half of those will be reservists.

If past experience is a reliable guide, at least half of these veterans will be enrolled on a full-time basis. As Figure 13 shows, among Vietnam-era veterans pursuing postsecondary education, 56 percent were enrolled full time. Most of the others were enrolled on a three-quarters or half-time basis; only 10 percent were enrolled less than half-time. Reservists must be enrolled at least half-time in order to

use their benefits. Most Vietnam-era veterans—77 percent—have enrolled at public institutions; of those, 57 percent have enrolled at two-year institutions and 43 percent at all other institutions.

These projections, if they prove reliable, portend an increased level of enrollments by veterans in higher education. Such projected increases have important implications for colleges and universities, many of whom already serve a good number of veterans but may wish to expand or improve their services in light of these likely increases.

Several additional caveats, however, must be offered regarding these projections. First, it is clear that the number of veterans using education benefits under the Montgomery GI Bill is not of the same magnitude as occurred with post-World War II veterans or, even, with post-Korean and Vietnam-era veterans. Today's military is smaller and, so, future cohorts of veterans will be necessarily smaller than those of past decades.

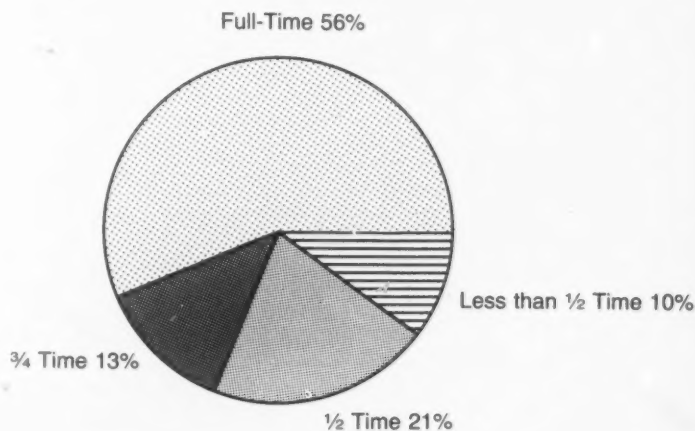
Second, this projected net increase in enrollments depends greatly on the prospect that a large number of reservists will take advantage of their education benefits; if, for example, only half as many reservists use their benefits, there would be no net gain in collegiate enrollments of veterans. The Veterans Administration is assuming that a high percentage of reservists will use their benefits. Yet, because reservists previously were ineligible for GI Bill benefits, there is no prior experience by which to judge these projections, which may be optimistic.

A third point, also related to the assumptions of high use of benefits, stems from the fact that, under some previous programs, veterans could receive a refund for their contributions if they did not pursue postsecondary education or other training after all. Indeed, under VEAP, only about half of participants actually used the benefits to which they were entitled; 47 percent requested refunds of their contributions. Because the Montgomery GI Bill does not permit refunds, the VA assumes that use of benefits will be quite high. An equally plausi-

ble view—given that veterans are mostly in their 20s and face employment and other responsibilities—is that a sizeable number of veterans will not be able to fit educational pursuits into their postservice lives. Because of conflicting demands, they will, in effect, “walk away” from their benefits. The educational benefits available to veterans are substantial, but they are limited to educational costs—i.e., tuition and fees.

Beyond 1993, barring dramatic changes in the size of the armed forces, the Veterans Administration expects continued incremental growth in the use of the New GI Bill by active duty personnel and steady rates of participation by members of the Selected Reserve. In each of the next few years, about 240,000 military personnel are expected to leave the services. Of each year's crop of departing servicemembers (officially termed “separations”), the VA estimates that about 200,000 began serving in 1980 or later.⁵⁰ These “separations” set a natural limit on the number of prospective users of Montgomery GI Bill benefits.

Figure 13
Study Patterns of Users of Old GI Bill



Source: Veterans Administration.

100

These additional numbers of veterans could be expected to fill much of the temporary enrollment gap created by a decrease in the number of male high school graduates in the next five years.

Conclusion

If the government's estimates prove correct, the number of veterans using Montgomery GI Bill benefits will increase dramatically in the next five years. By 1993, more than 400,000 veterans will be using the Montgomery GI Bill and other VA education benefits to pursue a college education. To put this into context, this number represents approximately 3 percent of the 12 million students currently enrolled in higher education.

Furthermore, these additional numbers of veterans could be expected to fill much of the temporary enrollment gap created by a decrease in the number of male high school graduates in the next five years.

If previous patterns prevail, slightly more than half of the veterans will be enrolled in four-year programs, and slightly fewer than half will be enrolled in two-year programs; the remainder will be enrolled in graduate-level programs. Most will be enrolled in public institutions.

Nevertheless, the projected enrollments of veterans should be viewed with caution. The Montgomery GI Bill is new, and a large proportion of the prospective beneficiaries are reservists—a component of military personnel that has not previously had access to GI Bill benefits. In fact, the VA's projections have been revised several times in the last six months to

reflect initial experience with the New GI Bill and budgetary changes.

The projections are thus sensitive to the following conditions:

- **Changes in the size of the force.** A smaller military force would mean smaller cohorts of veterans—thus, fewer participants in the New GI Bill. The current Administration already has reduced 1988 personnel levels and has proposed personnel cuts for 1989. In addition, under the terms of the recently ratified Soviet-American arms treaty, Pentagon planners say there will be cuts in the size of the force and thus the services will have to recruit fewer young people in the next few years than they had previously assumed.
- **Changes in the composition of the force.** In its short life, the New GI Bill has functioned as a successful recruiting tool, attracting to the services a number of young people who desire to continue their education. This is not inconsistent with the Pentagon's goal that most recruits have a high school diploma. Should the goals change, or should the services fail to recruit comparable numbers of people with aspirations for further education, participation in the New GI Bill would diminish.



U.S. Air Force

- **Changes in retention rates.** Higher retention rates in the military could also reduce the number of projected participants because a smaller number would be leaving the service. The trend is definitely upward: In 1986, almost half of all servicemembers completing their first term of duty re-enlisted—a sizeable increase from the 1977 reenlistment rate of 35 percent.⁵¹
- **Legislative and regulatory changes affecting the amount of benefits and/or contributions and their allowable use.** Although Congress shows little desire to make sweeping alterations in the popular Montgomery GI Bill, there are bills pending that would amend the contribution schedule and would liberalize the terms of the reserve GI Bill program to make it conform more closely to the active duty program. These proposals are intended to increase the levels of participation in the New GI Bill.
- **Policy changes affecting the relationship between tuition assistance and GI Bill benefits.** Substitution of GI Bill benefits for tuition assistance would alter the projections for their use. Currently, only a small fraction of active duty personnel who receive GI Bill benefits uses them while in the service. The New GI Bill is intended, in the words of Congress, to help servicemembers readjust to civilian life "after their separation from military service." The substantial benefits provided by the services' tuition assistance programs make tuition assistance more attractive and more likely to be used during the term of service. That situation could change, however, if budgetary constraints force the services to restrict further the availability of tuition assistance.⁵²
- **Actions of colleges and universities that affect the propensity to enroll.** Clearly, policies adopted or actions taken by colleges can influence enrollment decisions. The existence of admissions policies

that award credit for military experience, as well as the availability of counseling or other assistance targeted to the departing servicemember, can play a significant role. The provision of these services will help determine not only if and when a veteran enrolls but whether the veteran enrolls in a college-level program, as opposed to programs at other institutions or in work settings.

* * *

There are signs of growing awareness in the military, veterans and higher education communities of their mutual interests in facilitating the further education of young people in the armed forces. The Carnegie Corporation in 1987 sponsored a conference to examine such issues. The Army and the American Association of Collegiate Registrars and Admissions Officers have pledged their cooperation in making admissions material available to soldiers. In Maine, a 1987 meeting of state, college and military officials resulted in the creation of a military education advisory council that will oversee programs and services related to "the educational achievement of Maine's military populations."⁵³ At the federal level, a national commission staffed by the Veterans Administration is looking at ways to improve the governance of VA education benefit programs that will ease the regulatory burdens on participating institutions.

In short, while projections of future enrollments are tenuous, college enrollments currently generated by military personnel and veterans are substantial. In recent years, education policies promulgated by Congress, the Pentagon and the individual services and supported by educational institutions have aimed at increasing that participation. Colleges and universities have much to gain by developing or strengthening their collaborative relationships with the armed services.

Notes

1. Michael T. Laurence, "Recruiting the Force: The 1983 Perspective Revisited," June 1987, reprinted from the 1986 *Youth Attitude Tracking Study*, Defense Manpower Data Center, 1-2, and information provided by the Directorate for Accession Policy, Office of the Assistant Secretary of Defense, Force Management and Personnel.
2. Office of the Assistant Secretary of Defense, Force Management and Personnel.
3. *Ibid.*
4. *Ibid.*
5. Janice H. Laurence, *Military Enlistment Policy and Education Credentials: Evaluation and Improvement* (Alexandria: Human Resources Research Organization, 1987) 4.
6. Martin Binkin, *America's Voluntary Military: Progress and Prospects* (Washington, D.C.: Brookings Institution, 1984), 9-13. The miscalibration of test scores resulted in the military inadvertently admitting many low-scoring applicants.
7. Congress set a statutory requirement that no less than 65 percent of Army recruits have a high school diploma and that no more than 20 percent of Army recruits score in Category IV of the Armed Forces Qualification Test (AFQT).
8. Office of the Assistant Secretary of Defense.
9. *Ibid.*
10. *Ibid.*
11. *Ibid.*
12. Janice Laurence, *op. cit.*, 3. As of this writing, however, the policy is still in flux.
13. *Population Representation in the Military Services*, FY 1986, Office of Assistant Secretary of Defense, Force Management and Personnel (Washington, D.C.: Department of Defense, 1987), II-14.
14. Western Interstate Commission for Higher Education, "High School Graduates By State, 1979-80 through 1985-86," June 1987, 3.
15. ACE calculations based on WICHE estimates.
16. Projections of total numbers of high school graduates are taken from Western Interstate Commission for Higher Education, Teachers Insurance and Annuity Association and the College Board, *High School Graduates: Projections by State, 1986 to 2004* (Boulder: WICHE, 1988), 9.
17. *Population Representation*, FY 1986, II-14.
18. Information provided by the Office of the Assistant Secretary of Defense.
19. National Center for Education Statistics, "Early Estimates—National Estimates of Higher Education Statistics: 1987," December 1987.
20. U.S. Department of Labor, Bureau of Labor Statistics bulletin, June 1987.
21. Thomas Nardone, "Decline in Youth Population Does Not Lead to Lower Jobless Rates," *Monthly Labor Review*, June 1987, 39.
22. U.S. Department of Labor, Bureau of Labor Statistics, unpublished data.
23. Robert M. Hauser, "Post-High School Plans of Black High School Graduates: What Has Changed Since the Mid-1970's?" (Madison: University of Wisconsin, 1987).
24. William T. Grant Foundation, *The Forgotten Half: Non-College Youth in America* (Washington, D.C.: William T. Grant Foundation, 1988), 22.
25. Bureau of Labor Statistics, unpublished data.
26. Gregory Spencer, *Projections Of the Population of the United States, By Age, Sex, and Race: 1983 to 2080* (Washington, D.C.: Bureau of the Census, 1984), 45-57. Projections used are the middle series projections.
27. Rosalind R. Bruno, *School Enrollment-Social and Economic Characteristics of Students: October 1985 and 1984*, Series P-20, No. 426 (Washington, D.C.: Bureau of the Census, 1988) and other reports in the P-20 series.
28. Information provided by the Office of the Assistant Secretary of Defense.
29. Jane Newitt, "Looking For a Few Good Men," *American Demographics*, June 1988, 30-33.
30. C. Dennis Carroll, *High School and Beyond Tabulation: Military Enlistment and Recruitment Profiles* (Washington, D.C.: National Center for Education Statistics, 1984).
31. Rebecca M. Pliske et al, *Towards an Understanding of Army Enlistment Motivation Patterns* (U.S. Army: Research Institute for the Behavioral and Social Sciences, 1986), 7.

32. ~~The Eureka Project: A Review of Student Financial Aid in California, Origins and Outcomes: An Essay on the History of Student Aid in California.~~ May 1987.

33. Michele N-K Collison, "More Young Black Men Choosing Not to Go to College," *The Chronicle of Higher Education*, December 9, 1987, 1, 26-27.

34. Black recruits make up about 22 percent of Army recruits and 27 percent of New GI Bill participants, according to the Army education office.

35. Solomon Arbeiter, "Black Enrollments: The Case of the Missing Students," in *Change*, May/June 1987, 16.

36. Department of Defense 1986 Tuition Assistance Study, in progress.

37. *Ibid.*

38. Conversation with David Eyler, Servicemembers Opportunity Colleges, July 1987.

39. Information provided by the U.S. Air Force.

40. Information provided by DANTES.

41. Letter from C. Wayne Williams, Regents College, January 5, 1988.

42. Information provided by U.S. Army.

43. Information provided by U.S. Air Force.

44. "Army Tuition Aid Drying Up Under Budget Cuts," *The New York Times*, March 17, 1988.

45. Information ~~provided~~ by U.S. Army.

46. Veterans Administration, "Federal Benefits for Veterans and Dependents," January 1986, 13-14. The New GI Bill was made permanent by a bill enacted in law June 1, 1987, P.L. 100-48.

47. As of September 1987, according to the Veterans Administration, about 1.2 million had signed up for benefits under VEAP, but 550,000, or 47 percent, had requested refunds and thus opted out of the program.

48. Information provided by the House Veterans Affairs Committee, May 1988.

49. Veterans Administration, unpublished data, May 1988. Estimates of trainees include officers and enlisted personnel. Projections given are for the major education benefits programs only. Additional veterans are expected to be using vocational rehabilitation and other education-related assistance.

50. Information provided by the Veterans Administration, Office of Statistical Analysis.

51. *Defense Almanac '87*, September-October 1987, p. 34.

52. The Army already has decreed, as of January 1, 1988, that personnel who qualify for Vietnam-Era GI Bill benefits are generally ineligible for tuition assistance.

53. "Educational Achievement; Leadership Issues for Maine's Postsecondary Education and Military Communities," conference proceedings, Maine Department of Educational and Cultural Services, December 1987.

Appendix

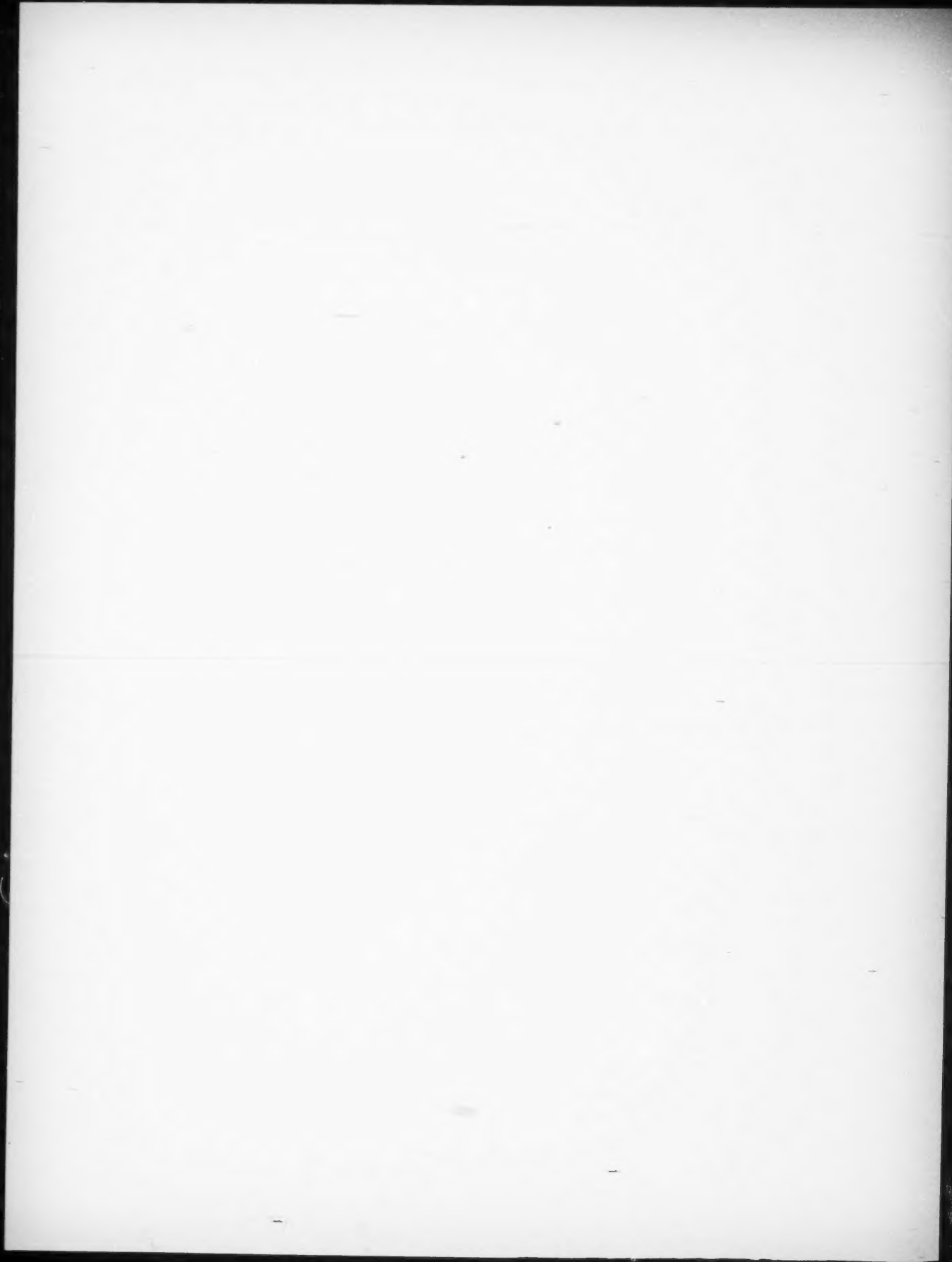


Table A-1
High School Graduates^a Among
Recruits, Actual and Projected,
1964-1992

Year	Percentage of Recruits
1964	69.4
1965	68.9
1966	77.8
1967	76.2
1968	73.6
1969	73.0
1970	71.8
1971	68.3
1972	66.5
1973	66.1
1974	61.0
1975	66.2
1976	68.8
Transition Quarter	71.2
1977	69.4
1978	77.1
1979	72.8
1980	67.7
1981	80.7
1982	85.7
1983	91.0
1984	93.3
1985	92.7
1986	91.7
1987	93.2
Projections	
1988	93.0
1989	93.0
1990	93.0
1991	93.0
1992	93.0

^aEnlistees who hold a high school diploma; does not include those who have passed General Educational Development high school equivalency exams.

Source: *Population Representation in the Active Duty Military Services, Fiscal Year 1985*, p. II-19, and Office of the Assistant Secretary of Defense, 1986; and other information provided by the Directorate of Accession Policy, OASD.

Table A-2
Undergraduate Enrollment,
Actual and Projected, 1979-1992
(Numbers in thousands)

Year	Enrollment
1979	9,998
1980	10,475
1981	10,755
1982	10,825
1983	10,846
1984	10,618
1985	10,597
1986 ^a	10,724
1987 ^a	10,895
Projections	
1988	10,919
1989	10,926
1990	10,937
1991	10,875
1992	10,757

^aThese figures are estimates.

Source: *Digest of Education Statistics, 1987*, Center for Education Statistics, Table 109; and "Targeted Forecast Next Five Years: Higher Education Enrollment Fluctuates," Center for Education Statistics, April 1988, Table 2.

Table A-3
Military Recruits, by High School Graduate Status and by Sex,
Actual and Projected, 1979-1992

Year	Total Males	Total Females	Male High School Graduates	Female High School Graduates
1979	273,738	42,025	191,543	38,383
1980	310,437	49,353	200,995	42,496
1981	286,080	41,677	226,091	38,531
1982	217,119	34,613	228,316	33,663
1983	269,157	35,856	241,958	35,749
1984	273,702	36,114	253,531	36,003
1985	262,969	38,478	241,303	38,072
1986	276,766	38,494	250,923	38,057
1987	261,118	36,219	241,108	36,112
Projections				
1988	237,349	33,343	212,400	33,200
1989	246,600	36,600	229,300	36,400
1990	259,100	38,600	241,000	38,400
1991	238,100	36,900	221,400	36,700
1992	250,400	36,400	232,900	36,200

Source: Office of the Assistant Secretary of Defense, Force Management and Personnel.

Table A-4
Black Male High School Graduates Enrolled in College,
in the Work Force, in the Military, and Elsewhere,
October 1979-October 1986
 (Numbers in thousands)

Year	High School Graduates			Enrolled in		Not Enrolled					
	Civilian	Military	Total	College	%	Work Force	%	Military	%	Other	%
1979	123	33	156	51	33	62	40	33	21	10	6
1980	163	31	194	57	29	85	44	31	16	21	11
1981	155	30	185	66	36	69	37	30	16	30	16
1982	191	28	219	74	34	89	41	28	13	28	13
1983	158	27	185	46	25	95	51	27	15	17	9
1984	129	27	206	69	33	89	43	27	13	21	10
1985	156	26	182	78	43	66	36	26	14	12	7
1986	174	28	202	56	28	92	46	28	14	26	13

Sources: College enrollment and labor force participation data are based on Census Current Population Surveys as reported annually by the Bureau of Labor Statistics. Military participation data are derived from Department of Defense reports and ACE estimates of recruits aged 17 to 19 who are recent high school graduates.

Table A-5
Seniors Who Say
They "Definitely" Plan to Enter
the Armed Forces After High
School, 1976-1985
(Percent)

Year	Blacks	Whites
1976	12.5	3.7
1977	8.2	4.0
1978	11.2	3.4
1979	9.9	2.9
1980	10.2	3.4
1981	10.7	4.4
1982	12.0	4.8
1983	15.6	5.8
1984	13.1	5.7
1985	16.3	5.3

Source: Bachman *et al.*, *Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors*, Ann Arbor: Survey Research Center, University of Michigan, in Robert M. Hauser, *Post-High School Plans of Black High School Graduates: What Has Changed Since the Mid-1970s?*, Madison: Center for Demography and Ecology, University of Wisconsin, July 1987, Tables 1 and 2.

Table A-7
Use of Benefits
Under Old GI Bill and VEAP
by Type of Training, 1986

	Old GI Bill
Two-year institution	123,902 (40.3%)
Four-year institution	99,453 (32.3%)
Graduate institution	34,213 (11.1%)
Noncollege institution	40,596 (13.2%)
On-the-job training	9,473 (3.1%)
Total	307,637 (100%)
	VEAP
Two-year institution	22,439 (35.5%)
Four-year institution	31,960 (50.5%)
Graduate institution	4,083 (6.5%)
Noncollege institution	4,738 (7.5%)
Total	63,220 (100%)

Source: *Veterans Benefits Under Current Educational Programs, Fiscal Year 1986*, Veterans Administration, 1987.

Table A-6
GI Bill Participation by Enlisted
Personnel and Officers, 1987

Service	Eligible	Enrolled	%
Army*	108,899	93,802	86.1
Navy	84,985	48,702	57.3
Air Force	48,973	24,228	49.5
Marine Corps*	30,111	21,778	72.3
Total DOD	272,968	188,510	69.1

*The Army and Marine Corps data do not include officers.

Source: Education Policy Directorate, Office of the Assistant Secretary of Defense, Force Management and Personnel.

Table A-8
College Enrollments of Veterans, Actual and Projected, 1980-1993
 (Numbers in thousands)

Year	Total Enrollments ^a	Program		
		Post Korean and Vietnam Era	Post Vietnam (VEAP)	Montgomery GI Bill
1980	845	843	2	—
1981	743	736	7	—
1982	642	621	21	—
1983	544	518	26	—
1984	456	421	35	—
1985	370	326	44	—
1986	348	258	58	32
1987	327	203	72	52
Projections				
1988	381	153	81	147
1989	413	125	79	209
1990	430	70	72	288
1991	395	—	64	331
1992	373	—	56	317
1993	404	—	48	356

^aEnrollments from major VA education benefit programs only. Does not include enrollments of dependents or beneficiaries of VA vocational rehabilitation. Includes reservists.

Source: For 1987 data, Statistical Review and Analysis Division, Veterans Administration; for previous years, "Veterans Benefits Under Current Educational Programs," annual publication of the Veterans Administration; for projections, ACE estimates based on information provided by Division of Veterans Benefits, Veterans Administration.

Resources

A compendium of related publications, projects and organizations

The Commission to Assess Veterans Education Policy, a Congressionally mandated panel of government, education and veterans officials. For more information, contact Babette Polzer, commission executive director, (202) 233-2876, or Allan Ostar, commissioner (president, American Association of State Colleges and Universities), One Dupont Circle, Washington, D.C. 20036, (202) 293-7070.

Servicemembers Opportunity Colleges, a network of postsecondary institutions seeking to facilitate enrollment by military personnel and veterans. For more information, contact David Eyler, SOC, One Dupont Circle, Washington, D.C. 20036, (202) 293-7070.

Population Representation in the Military Services, Fiscal Year—, an annual publication of the Department of Defense that contains demographic data on recruits and enlisted personnel. For copies, write the Accession Policy Directorate, Room 2B271, The Pentagon, Washington, D.C. 20301-4000.

Partnership in Excellence: AACRAO and Army Education, ongoing cooperation between the Army and the American Association of Collegiate Registrars and Admissions Officers to provide soldiers with information about educational opportunities. For more information, contact AACRAO, One Dupont Circle, Suite 330, Washington, D.C. 20036, (202) 293-9161, or Army Education Division, HQDA, ATTN: DAPE-MPE, Alexandria, Virginia 22331-0316, (202) 325-9805.

Educational Achievement: Leadership Issues for Maine's Postsecondary Education and Military Communities, proceedings of a December 1987 conference sponsored by Maine state

agencies that resulted in the creation of a military education advisory council. For copies of the publication or more information about the council, contact C. Donald Sweeney, Director, Division of Military and Veterans Education, Department of Educational and Cultural Services, State House Station #23, Augusta, ME 04333.

"Fact Sheet on Voluntary Education," an annual publication of the Department of Defense. Copies are available from the Education Directorate, Room 3B930, The Pentagon, Washington, D.C. 20301-4000.

Veterans Benefits Under Current Educational Programs, Fiscal Year—, an annual report of the Veterans Administration on the use of VA education benefits, by program, type of training and location of training. Copies are available from the Office of Information Management and Statistics, Statistical Review and Analysis Division (713), Veterans Administration, 810 Vermont Avenue, N.W. Washington, D.C. 20420.

The following sources are recommended for further reading:

Martin Binkin, *America's Volunteer Military: Progress and Prospects* (Washington, D.C.: Brookings Institution, 1984).

Mark J. Eitelberg, Janice H. Lawrence, Brian K. Walters, Linda S. Perelman, *Screening for Service: Aptitude and Education Criteria for Military Entry* (Washington, D.C.: Office of Assistant Secretary of Defense, Manpower, Installations, and Logistics, 1984).

Janice H. Lawrence, *Military Enlistment Policy and Education Credentials: Evaluation and Improvement*, (Alexandria, VA: Human Resources Research Organization, 1987).

Office of the Secretary of Defense, Directorate of Accession Policy, *The Profile of American Youth Study: Results and Implications*, September 1982.

Mark J. Eitelberg, "American Demographic Trends and National Security: Issues for the 21st Century," Naval Postgraduate School, July 1987. Paper prepared for the Global Demographic Trends and National Security Project of the Bipartisan Commission on Integrated Long-term Strategy.

William T. Grant Foundation Commission on Work, Family and Citizenship, *The Forgotten Half: Non-College Youth in America*, January 1988.

Choongsoo Kim, Gilbert Nestel, Robert L. Phillips and Michael Borus, "The All-Volunteer Force: An Analysis of Youth Participation, Attrition and Reenlistment," Center for Human Resource Research, the Ohio State University, May 1980.

Choongsoo Kim, *Youth and the Military Services: 1980 National Longitudinal Survey Studies of Enlistment, Intentions to Serve, Reenlistment and Labor Market Experience of Veterans and Attriters*, Center for Human Resource Research, the Ohio State University, May 1982.

Thomas M. Stauffer, Ed., *Competition and Cooperation in American Higher Education* (Washington, D.C.: American Council on Education, 1981).

Rebecca M. Pliske, Timothy W. Elig, Richard M. Johnson, *Toward an Understanding of Army Enlistment Motivation Patterns* (U.S. Army: Research Institute for the Behavioral and Social Sciences, January 1986).

Other Recent Reports from the Division of Policy Analysis and Research American Council on Education

Unless otherwise noted, reports are available at \$5.00/copy for ACE members or \$8.00/copy for non-members from: Division of Policy Analysis and Research, American Council on Education, One Dupont Circle, N.W. Washington, D.C. 20036. Prepaid orders only; no purchase orders, please.

- Andersen, Charles J. *International Studies for Undergraduates, 1987: Operations and Opinions*. Higher Education Panel Report No. 76, August 1988 (42 pp.) -
- El-Khawas, Elaine. *Campus Trends, 1988*. Higher Education Panel Report No. 77, September 1988 (39 pp.)
- El-Khawas, Elaine; Carter, Deborah; and Ottinger, Cecilia, Editors. *Community College Fact Book, 1988* (135 pp.). Order from Macmillan Publishing Company, Front and Brown Streets, Riverside, N.J. 08075 \$39.00 prepaid.
- Henderson, Cathy. *College Debts of Recent Graduates*. December 1987 (19 pp.)
- El-Khawas, Elaine. *Campus Trends, 1987*. Higher Education Panel Report No. 75, August 1987 (36 pp.)
- Rossmann, Jack E. and El-Khawas, Elaine. *Thinking About Assessment: Perspectives for Presidents and Chief Academic Officers*. June 1987 (22 pp.). Single copies free; \$1.00 a copy/two or more copies, prepaid.
- Andersen, Charles J. *Survey of Accreditation Issues, 1986*. Higher Education Panel Report No. 74, April 1987 (26 pp.)
- Ottinger, Cecilia, Editor. *Higher Education Today: Facts in Brief*. January 1987 (58 pp.)
- Hexter, Holly and Andersen, Charles J. *Admission and Credit Policies for Adult Learners*. Higher Education Panel Report No. 72, December 1986 (25 pp.)
- El-Khawas, Elaine. *Campus Trends, 1986*. Higher Education Panel Report No. 73, August 1986 (25 pp.)
- Petrovich, Janice and Hexter, Holly. *Campus Approaches to Faculty Retraining*. February 1986 (51 pp.)
- Andersen, Charles J. *Student Financial Aid to Full-Time Undergraduates, Fall 1984*. Higher Education Panel Report No. 68, January 1986 (23 pp.)
- Henderson, Cathy. *Forecasting College Cost Through 1988-89*. Policy Brief. January 1986 (6 pp.) Free.
- Miller, Scott E. *Financial Aid for Community College Students: Unique Needs and Scarce Resources*. December 1985 (17 pp.) Free.
- Holmstrom, Engin Inel. *Recent Changes in Teacher Education Programs*. Higher Education Panel Report No. 67, November 1985 (32 pp.)
- Suniewick, Nancy and El-Khawas, Elaine. *General Education Requirements in the Humanities*. Higher Education Panel Report No. 66, October 1985 (25 pp.)
- Andersen, Charles J. *Conditions Affecting College and University Financial Strength*. Higher Education Panel Report No. 63, October 1985 (34 pp.)
- Miller, Scott E. and Hexter, Holly. *How Low Income Families Pay for College*. July 1985 (32 pp.)
- Miller, Scott E. and Hexter, Holly. *How Middle Income Families Pay for College*. July 1985 (38 pp.)
- El-Khawas, Elaine and McKenna, Barbara. *Perspective: College Actions on South African Investments*. May 1985 (39 pp.)
- Lee, Valerie. *Access to Higher Education: The Experience of Blacks, Hispanics and Low Socio-Economic Status Whites*. May 1985 (55 pp.)
- El-Khawas, Elaine. *Campus Trends, 1984*. Higher Education Panel Report No. 65, February 1985 (19 pp.)
- Andersen, Charles, J. *Full-time Humanities Faculty, Fall 1982*. Higher Education Panel Report, No. 61, August 1984 (56 pp.)